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**CAPITAL STRUCTURES UNDER HYPERINFLATION:  
*THE ZIMBABWEAN EXPERIENCE***

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**A Thesis Submitted to the Faculty of Commerce of the  
University of Cape Town in Partial fulfilment of the  
Requirements for the Degree of Masters in Financial  
Management**

**Cape Town 2009**

## **DECLARATION**

I, Daniel Peter Chiwandamira hereby declare that this study is my own original work and that all references have been duly acknowledged.

I further declare that this thesis in part or in its entirety has not been submitted to any other University for degree purposes or any other educational purposes.

University of Cape Town

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## **ABSTRACT**

An essential part of an economy of developing and less developed nations lies in the establishment of a set of financial markets. In these financial markets companies are able to determine their capital structure by making rational decisions on whether to look internally or externally for financing. The study analysed the capital structures with a view of determining the extent of the applicability of capital structure theories to listed companies that are operating under a hyper inflation. The aim of the study was to verify the theoretical findings and predictions about determinants of capital structure.

There is extensive literature on capital structure theories and their validity, Miller and Modigliani (1958), Ross (1977), Myers (1984 and 1977), Myers and Majluf (1984), and others, which have focused on why firms opt for certain capital structures. These studies have been conducted in stable macro economic environments of developed, developing, and least developed countries. There has been no in-depth study on the choices of capital structure that has been done in an unstable economy that is characterised by hyper inflation, such as Zimbabwe. As a step to understanding the rational and choices of capital structure in a hyperinflationary environment, a sample of eight companies listed on Zimbabwe Stock Exchange, which has a total of seventy five listed companies, was selected. Size, tangibility, profitability, and non-tax debt shield were the determinants of capital structure that were used. Debt to equity ratio was also used to analyse the companies, sectors they fall in and an overall analysis.

The objective of the research was to test the validity and applicability of the conventional capital structure theories in the Zimbabwean environment between 1998 and 2006. In the literature review, the research presents an overview of four main capital structure theories namely; trade-off, signalling, pecking order and agency theory. The research critically examined capital structures of eight listed companies in Zimbabwe that have been operating under hyper inflation. The comparison of capital structures of companies in different sectors was done to determine if there was any link between the choice of a particular capital structure mix and the sector the company was operating in. The impact of interest rates was also taken into account in the research to determine the effect under the same environment.

Zimbabwe has experienced very high levels of inflation from 2000 with recent official statistics indicating inflation to be 100,580.2% as of end of January 2008.

This figure is widely perceived as understated as the basket of good used in the calculation is based on government controlled prices. According to the IMF the real inflation figure taking into account the “black market” prices is estimated at 150,000%. This presentation will not delve into the debate of the definition of hyperinflation but the evidence points out a hyperinflationary environment by all accounts.

To conduct the research, inflation adjusted financial reports dating from 1998 to 2006 of eight listed companies on the Zimbabwe Stock Exchange were analysed. This was in line with IAS 29 which recommends inflation adjustment of financial results in a

hyperinflationary environment to give a fair and meaningful view of the financial position of an entity.

The key findings of the research were that in a hyperinflationary environment, firms shift from expensive external sources of capital such as debt finance especially when interest rates increase to cheaper internal sources of financing, where implementation is almost instantaneous. Firms also adopt generic frameworks to make their capital structure decisions when faced with the same adverse economic factors, which means there are no major differences according to industry classification. However, capital structure theories that have been developed are applicable to Zimbabwe's hyperinflationary environment in different intensities, though some of the key underlying assumptions could not be assessed due to lack of quality information.

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# **CHAPTER 1: INTRODUCTION**

## **1.1 Introduction**

Since the article by Miller and Modigliani (M & M) (1958), debate has been on going about capital structures and reasons why firms borrow. Several studies by Ross (1977), Myers (1984 and 1977), Myers and Majluf (1984), Marsh (1982), and others which can be found in a survey by Harris and Raviv (1991), have been conducted to understand the relationship between debt and equity and the reason why firms opt for a particular capital structure. These studies are highlighted in the subsequent theories stated in the research which were primarily built on the M & M Propositions. The underlying assumption of most capital structure theories has been a stable macro-economic environment where market forces come into play. According to a country report by the International Monetary Fund (2004), Zimbabwe has experienced one of the worst post Second World War economic declines in living history and as such has provided an opportunity to learn more about how publicly listed companies have operated under such an environment, particularly in the context of capital structure decisions.

Empirical research has been carried out in both developed and developing countries based on the various capital structure theories or hypotheses, such as the agency theory, signalling theory, pecking order theory and the trade off theory.

Fan, Titan and Twite (2003) in their study of capital structures in 39 developed and developing countries concluded that a country's legal system, tax system as well as

information environment affected the financing decisions. In this study they concluded that the presence of information intermediaries resulted in lower leverage reduced short term debt and the use of more trade credit. They also concluded that the level of sophistication of the banking sector, equity and bond markets influenced capital structures with weak evidence suggesting that higher level of funds that are available to institutional investors are linked to lower leverage and usage of long term debt.

Hammes (2003)\_ in a survey of companies in Canada, Denmark and Italy, Sweden, UK and the US concluded that firm size, profitability, tangibility, market to book ratio have significant impact on firm's choice of capital structure theories.

As evidenced by the studies cited it is clear that there is no universal single theory of capital structure that can be applied in every situation. In addition there is also lack of consensus about the basic empirical facts on the choice of an optimal capital structure. Miller and Modigliani laid the foundations for capital structure theories and concluded that under certain conditions, a company's current market value would not be affected by the financing policy. Ross (1977) concluded that the level of debt chosen by managers sends a signal to external investors about the quality of the company, in support of the signalling theory. Myers (1977) argues that ultimately the company bears all the tax consequences of its operations whether it pays these taxes directly or indirectly. Jensen and Meckling (1976) developed agency theory due to the conflict between the interests of shareholders and their agents, who are managers, and concluded that by issuing debt, managers are committing themselves to pay out future cash flows.

Apart from the fact that the studies that have been cited above show that there is no overall consensus; they were also conducted in stable economic environments. While the Zimbabwe situation is very isolated, it presents an opportunity to investigate capital structure choices under an unstable economic environment. This research adds a new dimension by examining how listed companies that have been operating in a hyper inflationary environment have financed their operations and seeks to establish the applicability of the different capital structure theories. In order to investigate the capital structure decisions in the context of a volatile economic environment, this study answered the following questions by undertaking studies in eight companies that are listed on the Zimbabwe Stock Exchange: and examined their financial statements between 1998 and 2006.

- a. How have corporate structures and financing patterns changed in Zimbabwe between 1998 and 2006?*
- b. How have listed companies in Zimbabwe financed their growth and to what extent have capital structure theories been applicable?*
- c. Are there any differences in corporate structures according to industry classification, size of firm under hyperinflation?*

## **1.2 Research Objectives**

The purpose of this research was to test the validity or otherwise of capital structure theories under abnormal economic conditions. The essence of most capital structure decisions is to find an optimal mix of debt and equity that maximises value based on certain underlying assumptions. The study was carried out to establish to what extent the

widely held financial theories on capital structures hold true when the macro-economic environment is unstable and there are many variables. In the case of Zimbabwe, the country has been experiencing unprecedented inflation yet the stock market has continued operating albeit with serious challenges. Previously the same stock exchange had always been used as a model of a successful emerging capital market. On the other hand the availability of long term debt is almost non-existent as most lenders are not willing to commit funds for longer periods due to inflationary capital erosion. This is evident in the inactivity of the bond market. The research was also conducted to add to the on-going debate about capital structures especially in a developing country operating under high levels of inflation.

With such high levels of inflation, it was widely expected that the Zimbabwean economy would have collapsed and the capital market would have been totally dysfunctional. However, this has not occurred and by and large the stock market is still operational. It is important therefore to establish how companies have adjusted their capital structures to survive under such conditions. This study will shed light on this particular aspect.

It is important to note that this is the first known study of this scope, which intends to add knowledge on the issue of capital structures under hyperinflation. Other studies<sup>1</sup> done previously have concluded that companies operating in a particular industry sector tend to have similar capital structures. The extreme form of these theories makes the assumption that; firms in a particular sector simply “follow the leader” in determining their debt to

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<sup>1</sup> Titman and Wessels [1988] – US, Campbell and Hamada [1995] – Japan and Garud and Sharpe [1996] – Australia. Barclay and Smith [1995], Stohs and Mauer [1996] and Guedes and Opler [1996]

equity mix (Behavioural Aspects of Intra Industry Capital Structure Decisions, 1996). This research will seek to verify whether this also holds true in Zimbabwe during hyper inflation.

Finally the research also seeks to identify trends and patterns in capital structures and the optimum mix over the defined period and the impact of those shifts in relation to profitability, non debt tax shields and the size of the firm.

### **1.3 Importance of Research**

Companies can finance operations through ordinary and preferred shares, with retained earnings, or with debt. In most instances a company uses a combination of these instruments. Capital structure refers to the relationship between debt and equity and provides an insight into how risky a company is. M & M (1958) brought in a new dimension, which highlighted the importance of debt mainly due to the tax shield offered to companies. From this it would appear therefore that companies can continue leveraging themselves in order to benefit from the tax effects.

In practice, high levels of debt introduce prospects of bankruptcy and therefore there exists a point at which companies simply can no longer afford to borrow. Capital structures are important, as they are often a choice by management of the compromise between no debt and equity. Managing capital structures is important for the survival of a company. Given the importance of capital structures, the study delved into an

understanding of how companies have structured their balance sheets under hyperinflation.

## **1.4 Research Limitations**

The Zimbabwean government has continuously intervened through the Central Bank and provided various loans at concessionary interest rates that are below inflation. This has resulted in the Central Bank adopting a dual interest rate regime whereby market rates which are still significantly negative, and running parallel to concessionary rates that were awarded to corporates with the view of stimulating growth. This has caused distortions, which are evident in the research, and this will have an effect on the comparisons drawn between companies in from the same sector depending on the source of funds. The availability of these funds also had an effect of influencing companies to favour debt as a form of finance with some arbitraging on the debt and investing the funds in the financial markets. In addition, the research will attempt to understand how the intervention of Central bank might have impacted on capital structure decisions given the fact that hyperinflation makes capital cheap for as long as the interest rate is below the inflation rate. Nevertheless it will be interesting to see the impact of such policies on the capital structures of the sample companies and based on this, one can make an inference on the rest of the listed companies given that the total population is very small with a total of seventy five companies with a sample of eight used for the study.

Due to the small size of the sample which is about ten percent (10%) of the total, no statistical association tests were undertaken and in fact such tests were not intended from

the outset. The small sample size is therefore another limitation of the study including the fact that in some cases only one company was selected during the analysis of the sectors. This was due to the fact that such sectors only have one company listed on the stock exchange. Caution should be exercised where general conclusions are made based on such limitations.

A further limitation of the research was that the analysis was based on inflation adjusted financial statements according to IAS 29 (Financial Reporting in Hyperinflationary Economies). However, this only came into effect in Zimbabwe during the period between 2001 and 2002 thus the information prior to that is historical. This somehow distorts the comparison but nevertheless the time period covered is long enough to provide a basis for accurate analysis. The other area, which this study will not delve into, is the use of the inflation adjusted accounts, an issue, which is widely disputed in the Zimbabwean environment with the main argument being the base to be applied to adjust the historical financials. This is an area of subjectivity and much debate; the literature review section will address some of these issues.

## **1.6 Organisation of the Dissertation**

The rest of the dissertation is arranged as follows: Chapter 2 is a review of the literature which gives the theoretical anchor for the study; this chapter highlights work done by other researchers and indicates the gaps which the study seeks to fill. Chapter 3 is a continuation of the literature review and reviews the whole subject of choice of capital structures while Chapter 4 provides a background about Zimbabwe and also discusses the



subject of hyperinflation; this is important so that the reader is able to relate the analysis to the background against which companies have been operating. The chapter also includes a section, which provides an analysis of the Zimbabwean economy highlighting major economic milestones since 1980 when the country was granted political independence from Britain. Chapter 5 deals with the methodology and approach used to conduct the study, it helps in underpinning the findings of the study as it sets the parameters of the research. Chapter 6 discusses the findings and presents the results of the research. Finally Chapter 7 deals with the conclusions and recommendations, it summarises the research and highlights issues that further research can consider.

## **CHAPTER 2: CONCEPTUAL FRAMEWORK**

### **2.1 Introduction**

This chapter provides an overview of the principles and theory of capital structures. There is an abundance of literature on Capital Structure Theory and an attempt is made to summarise the key issues and link them to this study, however, it is beyond the scope of this study to present all the arguments and controversy surrounding academic debate on capital structures.

Capital Structure Theory is defined as the study of the relative importance of debt and equity in influencing the value of a firm. The performance of a company in the market is to some extent influenced by the efficiency of its capital structure. In basic terms, the composition of the total capital of a company is what makes the capital structure. Total capital in this case is defined as the net disposable funds after subtracting current liabilities. The next section presents the theory of capital structures and begins by looking at some of the fundamental issues where the study of modern day finance has evolved.

### **2.2 Miller & Modigliani Propositions**

It is most appropriate to commence a review of Capital Structure Theory by considering the “irrelevance” propositions published by Miller and Modigliani in their paper in 1958. Their work laid the base for the history of modern finance theories and is regularly referred to in discussions on factors that influence policies on capital structures. The M &

M proposition is that given some conditions, a company's current market value would not be affected by the financing policy. In other words M & M's hypothesis was that there is no optimal capital structure due to the fact that whatever the level of debt, a company's Weighted Average Cost of Capital (WACC) would not change. Any increase in Return On Equity (ROE) resulting from financial leverage is exactly offset by the increase in risk and therefore WACC is constant. In simplistic terms, Miller and Modigliani in their paper in 1958 was quoted as saying "the size of the pie does not change regardless how you slice it". Their research was premised on the following fundamental assumptions:

1. There is neither brokerage nor any other transaction costs.
2. There are no personal income taxes or corporate taxes.
3. In the event of insolvency, company assets can be disposed of at fair market value.
4. All market participants can lend or borrow at the same risk free rate.
5. All investors are price takers and have the same information as management about the firm's earnings which are described by a normal distribution.
6. Earnings before Interest and Taxes (EBIT) is unaffected by the use of debt.

The conclusion from the M & M research was two propositions, which are summarised below.

**Proposition 1: The market value of a firm is independent of its capital structure**

Stated mathematically  $V_L = V_U$  where  $V_L$  is a levered firm and  $V_U$  represents value of an un-levered firm. M & M argued that if  $V_L \neq V_U$ , investors would use arbitrage until

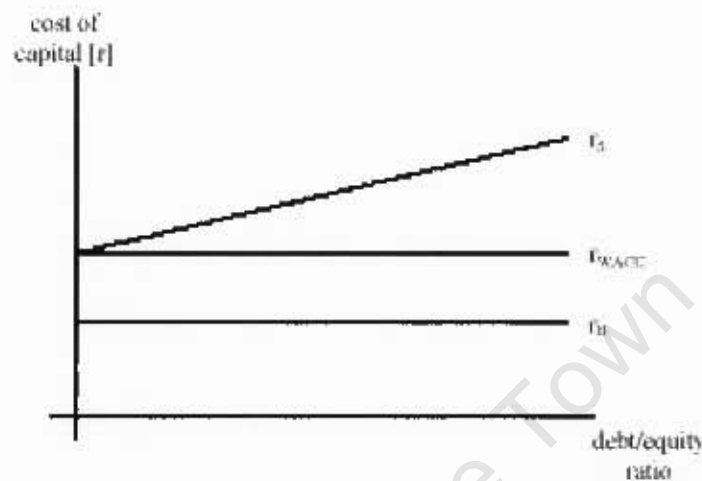
the share prices of the two firms were the same. From the first proposition M & M derived the second proposition.

**Proposition 2: Firm's leverage has no effect on its Weighted Average Cost of Capital (WACC)**

“The increased cost of borrowed funds as leverage increases tends to be offset by a corresponding reduction in the yield of common stock” (Miller and Modigliani, 1958). In other words, the cost of equity capital is a linear function of the debt to equity ratio. This proposition can be stated mathematically as follows:

$R_s = R_o + B/S (R_o - R_b)$  where  $R_s$  is the cost of equity (required rate of return on equity),  $R_b$  the cost of debt (required return on debt),  $R_o$  is the cost of capital of an all equity firm,  $B$  is the total debt and  $S$  is the value of equity. The equation means that the average weighted cost of capital is constant regardless of the debt to equity ratio, a firm's attempt to reduce the cost of capital by adding debt, which is cheaper than equity will be offset by an increase in the cost of equity as it becomes more risky. The graph below illustrates this mathematical relationship better.

**Figure I.1.**



*Source: Ross et al. (1996)*

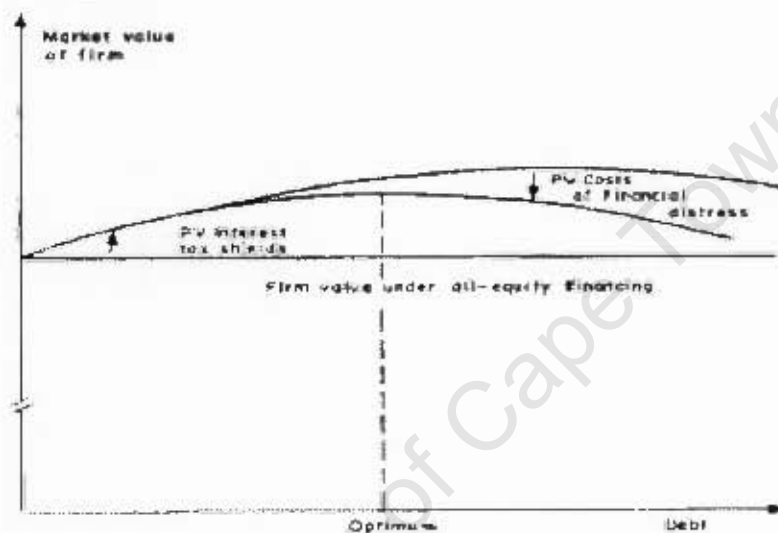
Having provided an overview of the fundamentals of Capital Structure Theory based on the initial work by Miller & Modigliani (1958), if the assumption that there are no taxes and bankruptcy costs is relaxed, it takes us to the financial trade-off theory, which is discussed in the next section. The implication of the theory was that even when debt was cheaper there would be a corresponding offset in an increase in the cost of equity thus the value of the firm would remain constant.

### **2.3 Trade-Off Theory**

The trade-off theory as its name implies states that optimal debt-equity ratio of a firm is determined by a trade-off between the costs and benefits of debt assuming that the company's assets and investment plans are held constant. What this means is, companies should borrow up to the point when the marginal present value of the tax shield is just

offset by the increase in the present value of bankruptcy costs. The diagram below illustrates this relationship.

Figure 1.2.



Source: Myers (1984)

The importance of the trade-off theory is the value of a leveraged firm is higher than that of an un-levered firm as a result of the tax savings through the use of debt. This is a departure from the initial M & M “no taxes” assumption, which had argued that a firm’s capital structure had no impact on its value. Barclay et al. (1995) submitted that company tax allows deduction of interest payments but excludes dividends in the computation of taxable income. This therefore means that the choice of a financing structure in terms of debt to equity ratio becomes an important strategic decision which impacts on the company’s after- tax cash flows. Increasing the level of debt should result in a lowering of the tax liability and a consequent increase in the after-tax cash flows. Correia et al. (2003) summarises the M & M assumption with corporate tax by stating that a firm’s

WACC would decrease continuously as financial leverage increases towards 100% debt finance. Mathematically this is represented by the equation:

$V_L = V_U + T_c B$  where  $T_c B$  is the present value of the tax shield ( $T_c$  represents company tax rate and  $B$  is the value of debt) and M & M Proposition II becomes  $R_s = R_o + B/S (R_o - R_b) (1 - T_c)$ .

The above relationship implies that companies can maximise value by assuming an all debt capital structure. Myers (1993) argues that few corporates are guaranteed to always show taxable profits in the future. A loss making company is unable to use the tax shield and basically forfeits the time value of money but carries the tax shield into the future.

Miller (1977) in article entitled “Debt and Taxes” revisited the issue of tax advantage of debt by also looking at the compensation that lenders (investors) will require as they are expected to pay tax on the interest income. Equity investors on the other hand get a tax break as they can opt to postpone payment of income tax by not realising the capital gains. In the long run Myers (1977) argues that ultimately the company bears all the tax consequences of its operations whether it pays these taxes directly (company tax) or indirectly (higher returns required on the securities that are traded).

In conclusion, after taking into account personal taxes, the value of a levered company is given by the relationship:

$$V_L = V_U + [1 - (1 - T_c) (1 - T_s) / (1 - T_b)] * B$$

Where  $T_b$  is the personal tax rate on ordinary income such as interest income and  $T_s$  is the personal tax rate on equity distributions. The next section outlines the financial theory with respect to bankruptcy costs.

## **2.4 Bankruptcy Costs**

So far M & M's model has not taken into account the fact that as debt increases so does the risk of bankruptcy. Generally there are two forms of bankruptcy costs; direct and indirect costs. Legal and administrative costs of liquidation and restructuring are often categorised as direct costs. Michal Palata (2003) argues that while these costs can sometimes be large in absolute terms, generally they are very low compared to the value of the firm. Warner (1977) found that, in a survey of 20 railroad bankruptcies, the actual costs were about 1% of the market value of the company seven years before the bankruptcy and the figure tended to rise as the bankruptcy approached (i.e. 2.5% of the market value of the firm three years prior to the bankruptcy). Due to the small quantum value of the direct bankruptcy costs in relation to the firm value, one can argue that these costs do not therefore play a major role when it comes to the choice of capital structures.

It is important to look at the indirect bankruptcy costs and analyse their impact on the choice of capital structures. Barclay et al. (1995) point out that certain indirect bankruptcy costs can be very significant for both small and large firms and that they are best thought of as reduction in company value due to a shift in the company's investment policy arising from financial distress. The costs arise when the company is unable to carry on in business due to under investment when there is a threat of bankruptcy. Myers (1993) makes a very interesting observation: "The moral is; think not only of the



probability that borrowing will bring trouble. Think also of the value that may be lost if trouble comes.” Myers (1984) in an earlier paper had aptly summed up the literature on bankruptcy costs by making two very important statements about financing behaviour:

- 1) Risky firms ought to borrow less. Risk in this case is defined as the variance rate of the market value of the firm’s assets.
- 2) Companies with intangible assets where lenders are unable to collateralise the assets, tend to have low gearing and generally find that debt financing is expensive. Specialised intangible assets are more likely to lose value in financial distress.

In conclusion, we will briefly present a regression model that can be used to test the validity and application of the Trade-Off Theory. The model studies the effects of the factors, which have been discussed so far on a firm’s leverage and is expressed mathematically by the following relationship:

$$Lit = \alpha + \beta Fit + \epsilon it$$

$Lit$  represents the leverage of the firm  $i$  on the date  $t$  and  $Fit$  the set of factors observed at the date  $t$ . Taking into account the different variables, Rajan and Zingales (1995) have expanded the regression model into:

$$Lit = \alpha + \beta_{size} SIZEit + \beta_{profit} PROFITit + \beta_{tang} TANGit + \beta_{mtb} MTBit + \beta_{tax} TAXit + \epsilon it$$

A brief discussion of the factors and how they relate to leverage is done below:

- a. **Size.** According to Rajan and Zingales (1995), large companies tend to be more diversified and generally fail less often and therefore size is an inverse proxy for the probability of bankruptcy. Trade-off theory expects size to be positively

correlated to leverage ( $\beta_{size} > 0$ ). Size is often represented by the natural logarithm of sales or natural logarithm of total assets.

- b. **Profit.** Trade-off theory predicts that profit making firms are more highly leveraged to offset corporate taxes. Profitability is represented by earnings before interest and taxes (EBIT) divided by total assets (TA) or EBITDA (EBIT less depreciation and amortization) over total assets. Trade-Off Theory predicts that  $\beta_{profit} > 0$ .
- c. **Nature of Assets (TANG).** Tangible assets can be used as collateral, which means that the more assets one has the greater the capacity to borrow. Trade-Off Theory predicts  $\beta_{tang} > 0$ .
- d. **Growth Opportunities (MTB).** Market-to-book ratio represents market expectations about the value of future investments as well as growth prospects of the firm. Trade-off theory predicts a negative correlation between this ratio and leverage.  $\beta_{mtb} < 0$ .
- e. **Taxes (Tax).** To protect payment of high taxes, companies tend to use debt as a shield. Trade-off theory therefore predicts a positive relationship with leverage  $\beta_{tax} > 0$ .

Having discussed the trade-off theory, which is a natural progression to the M & M propositions, we will now proceed to briefly review other theories which offer a different perspective to the choice of capital structures. The next section will present two theories that are based on asymmetric information.

## **2.5 Signalling Theory**

One of M & M's assumptions is called symmetrical information, where investors and managers have the same information about the future prospects of a company. In reality this is never always the case, as managers tend to have better information than external investors. This is called asymmetric information and it has an important effect on optimal capital structure. Ross (1977) argued that managers with full information about the company and with their rewards depending on the firm value and future returns are motivated to send signals to investors. Under this model, managers know the true distribution of company returns while investors do not. Managers are rewarded if the firm's shares are more highly valued by the market but are punished if the company is liquidated. This means that the level of debt chosen by managers sends a signal to external investors about the quality of the company. High leverage is a "good signal." The empirical implication of this finding is that, one would expect positive (negative) stock price reactions in response to capital structure changes that increase (decrease) gearing. This is in contrast to the Pecking Order Theory which is discussed in the next section.

## **2.6 Pecking Order Theory**

Myers (1984) and Myers and Majluf (1984) developed the Pecking Order Theory, as it is known today. Under the Pecking Order Theory, managers with asymmetric information about positive future prospects of a company will raise capital internally by reinvesting net income and disposing off its short term marketable securities. Only when this source of funding has been exhausted, will management issue debt and probably preferred stock.

The Pecking Order Theory generally regards issuance of common stock as the option of last resort.

As evidenced above, there is no well defined optimal capital structure in the Pecking Order Theory. The benefits of interest tax shield and the threat of financial distress have secondary significance under the Pecking Order Theory. Level of gearing is simply a summation of past events and debt ratios change when there is an imbalance of internal cash flow, net of dividends and real investment opportunities. This theory offers an explanation on why highly profitable and cash rich companies borrow less. The reason for low gearing is not because they have low target debt ratios but due to the fact that they have sufficient internal resources to finance their capital investment.

We will briefly discuss in the next section the last capital structure theory which is the agency theory.

## **2.7 Agency Theory**

One fundamental assumption of the previous capital structure theories is that managers and shareholders interests are perfectly aligned. This however, in reality is usually not the case and the agency theory recognises that people will make decisions in their own interests. These decisions could be congruent with the interests of the firm but sometimes are not. A quotation from Adam Smith (1776) is appropriate: “The directors of such (joint-stock) companies, however, being the managers rather of other people’s money than of their own, cannot well be expected to watch over the company with the same

anxious vigilance with which the partners in a private company frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for the master's honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company”

Jensen and Meckling (1976) developed Agency Theory as a consequence of the conflict between the interests of shareholders and their agents (management). They explained how optimal capital structures can be determined with the assistance of agency costs arising out of the conflict between shareholders on the one hand and management on the other. A number of authors have extended this theory and its application further. Key among these is the contribution of Myers (1997) on agency costs of debt and Jensen (1986) on the role of free cash flow in the determination of an optimal capital structure. Jensen argues that by issuing debt, managers are committing themselves to pay out future cash flows. Thus debt reduces the agency costs of free cash flow by reducing the amount of cash available for spending at the discretion of managers. Debt therefore plays a very important control function in companies that generate large cash flows but with low growth prospects and more importantly in companies that are down sizing. In these companies there is tremendous pressure to waste company resources through investments in uneconomic projects.

Jensen and Meckling (1976) noted that highly geared companies or those that are close to bankruptcy tend to invest in very risky projects as they feel that they are managing

somebody else's money. If an investment yields large returns that are well above the face value of the debt, shareholders will derive most of the gain. While on the other hand, if the investment does not succeed, holders of the debt face the consequence due to the fact shareholders have limited liability. Because of this, shareholders will pursue even high-risk projects that end up reducing the value of the firm.

Harris and Raviv (1991) argue that such investments result in a decrease in the value of the firm. The reduction on the value of the equity from the poor investment can be more than offset by the gain in the equity value captured at the expense of debt holders.

In summary Jensen and Meckling (1976) state that the agency costs associated with debt consist of the following:

1. The opportunity wealth loss caused by the impact of debt on the investment decisions of the company.
2. The monitoring and bonding expenditures by the bondholders and the company.
3. The bankruptcy and reorganisation costs.

In conclusion it has been shown that the agency effects of debt can potentially influence capital structure decisions and the optimal capital structure can be determined by trading off the agency costs of debt versus the benefits of debt as previously described. To sum up this chapter, the fundamental assumptions and implications of each of the capital structure theories will be presented in summary in Table 1 below:

**Table 1 Summary of Capital Structures**

<b>Theory</b>	<b>Key Assumptions</b>	<b>Key Predictions</b>
<b>Trade Off Theory</b>	Releases the “no taxes” and “no bankruptcy costs” assumptions.	<ol style="list-style-type: none"> <li>1. Companies follow a trade-off process of capital structure adjustment that leads to an optimal gearing level over the long term.</li> <li>2. The effective tax rate is positively related with the debt level.</li> <li>3. Default risk is negatively correlated to firm’s debt ratio.</li> <li>4. Companies with greater growth opportunities will have a lower target debt ratio.</li> <li>5. Company debt is positively correlated with the tangibility of its assets.</li> <li>6. The size of a company is positively correlated to the level of debt.</li> <li>7. There is a negative relationship between gearing and profitability.</li> </ol>
<b>Signalling Theory</b>	Information asymmetry between managers and investors.	<ol style="list-style-type: none"> <li>1. Leverage is positively correlated with company value.</li> <li>2. The debt-equity ratio will be positively correlated with the company’s profitability.</li> <li>3. Leverage is positively related to the extent of managerial ownership.</li> <li>4. One cannot expect positive (negative) stock price reactions in response to capital structure changes that increase (decrease) leverage.</li> </ol>
<b>Pecking Order Theory</b>	Information asymmetry between managers and investors.	<ol style="list-style-type: none"> <li>1. There is a pecking order: companies prefer internal to external finance and issuance of safer securities to more risky ones.</li> <li>2. Leverage increases with the extent of information asymmetry.</li> <li>3. The level of a company’s debt is negatively correlated with the volume of free cash flow.</li> <li>4. Debt issues do not cause any stock price movements</li> </ol>
<b>Agency Theory</b>	Interests of managers, shareholders and	<ol style="list-style-type: none"> <li>1. Leverage is positively correlated with the volume of free cash flow.</li> <li>2. Bond contracts will include features that</li> </ol>

	debt holders are not perfectly aligned.	<p>attempt to prevent asset substitution.</p> <p>3. Firms with fewer growth opportunities will have higher debt levels.</p> <p>4. Leverage is negatively related to monitoring and investigation costs.</p>
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## **CHAPTER 3: CHOICES OF CAPITAL STRUCTURES**

### **3.1 Introduction**

The chapter is a continuation of the literature review and provides insight into what influences companies to make a choice of the optimal capital structure. Prior research on in Least Developed Countries (LDC) is reviewed to identify the gains and reveal the areas that are still lacking, on a comparative with the Zimbabwean case.

Capital structure theory implies that companies make a choice of what has been often referred to as a target debt to equity ratio and that this choice is based upon a balance between the cost and benefit of debt as compared to equity (optimal structure).

According to a survey by Harris and Raviv (1990), there exists a lot of literature, which describes and attempts to explain the choices of capital structures in developed countries. This literature normally makes a fundamental assumption that well functioning liquid financial markets in which investors can participate and diversify their risk exists and also that a country's legal system honours and protects ownership of property. While this holds true in developed countries, the same cannot be said in certain developing countries where there is little or no respect for rule of law and in the case of Zimbabwe the general market conditions have been far from ideal.

The Zimbabwean economic environment has also resulted in interest rate distortions where rates are hugely negative and this has had an effect where the capital market is not

fully functional. There is no fluid and active bond market to facilitate optimal capital structure decisions. Other hybrid finance products such as Asset Based Securities are non-existent because of the economic distortions. This has had an effect on the choice of the capital structure of firms.

### **3.2 Previous Research in Least Developed Countries**

The International Finance Corporation (IFC) through its Economics Department launched detailed research into this area of capital structures in Least Developed Countries (LDC) and commissioned several research projects whose findings will be reviewed in this project. Singh and Hamid (1995) as part of the IFC funded project noted that there was a serious lack of knowledge about capital structures in developing countries. Part of the reason of this lack of information was attributed to poor accounting data, which made it very difficult to compile valuable analytical reports. In this first study Singh and Hamid (1995) reviewed nine countries namely: Jordan, India, Malaysia, Mexico, Pakistan, Thailand, Turkey and Zimbabwe. The study set out some research questions, which primarily considered the following issues:

- a. Nature of corporate capital structures in developing countries in the 1980s.*
- b. How corporates in developing countries financed their growth and to what extent was the "Pecking Order Theory" applicable.*
- c. Whether there were any inter country differences in corporate structures and also whether there were similarities with developed countries financing patterns.*
- d. How corporate structures and financing patterns have changed in developing countries during the 1980s.*

- e. *Whether corporate structures and financing profiles of companies supported by the IFC were similar to those that were not supported.*
- f. *Did fast-growing, developing countries have different corporate structures from unsuccessful ones?*

In conclusion, Singh and Hamid (1995) found out that there were major differences in structures of corporate finance between developed countries and developing countries. They found out that corporates in developing countries used more external finance than their counterparts in developed countries. This was a surprise as the generally held view had been that there is a serious lack of capital in LDC's and also according to the "Pecking Order Theory" companies use internal funds first before resorting to expensive external funds. The second finding was that more than half the companies that were surveyed in LDC's, used a greater percentage of equity rather than debt to finance their growth. This was different from the pattern found in the developed countries such as Japan, France and Italy where previous studies by Whittington (1968, 1975); Singh (1971, 1975); Whittington (1971, 1980); Meeks (1977) and many others had found out that corporates use external financing and to a large extent debt for growth. This research is different in that it considers capital structures for a specific country, Zimbabwe, and goes further in analysing structures of eight listed companies. The research also takes into account the effects of hyperinflation and seeks to understand how companies are financed. Results from Singh and Hamid's paper will be used to compare the difference in the financing structures that have been in operation in Zimbabwe from 1998.

Demirguc-Kunt and Maksimovic (1994) investigated capital structures in a sample of the largest publicly traded firms in ten developing countries-Brazil, India, Jordan, the Republic of Korea, Malaysia, Mexico, Pakistan, Thailand, Turkey and Zimbabwe between 1980 and 1991. Choice of these countries was based on the fact that they had reasonably well developed capital markets and gave a good geographical spread from which one could learn about the diverse experiences out of which conclusions could be drawn about capital structures. Their major finding was that variables that predict capital structures in the United States also predict choices of capital structure in these developing countries. In addition they found out that variables suggested by Agency Theory explained more of the variation than variables suggested by tax based theories. For both short term and long term equations in most of the countries sampled, they also concluded that asset structure; liquidity and industry effects had more explanatory power than firm size, growth opportunities and tax effects. Finally they concluded that in most countries, total indebtedness was negatively related to net fixed assets, suggesting that markets for long term debt do not function properly. It is interesting to note that this study also covered part of the South American financial crisis where Brazil's average annual inflation was 327% with Mexico's at 66% followed by Turkey at 44% but in the case of Zimbabwe, the country had just attained independence and had inherited a fairly robust financial services sector. Average annual inflation for Zimbabwe was 12.5% compared to the current 7634.8% (Financial Gazette Business Report 23 August 2007). While the study looked at Brazil and Turkey under hyperinflation the levels were nowhere near the present situation in Zimbabwe. In addition, the issue of rule of law in terms of respect of private property was not taken into account. All the same, the results and findings of their

paper will be analysed further and compared to the findings of the current situation in Zimbabwe. This research takes the subject further and focuses on just one country and seeks to provide a new insight on the behaviour of companies when the external macro-economic environment is far from normal.

Stark (1996) in his study on Determinants and Trends Of Capital Structures of Listed South African Industrial Companies 1975 to 1993 argues that high interest rates cause companies to choose one of two routes;

- (i) to be risk averse and maintain low gearing or
- (ii) to seek maximum debt structure to utilise tax benefits.

He further argues that in South Africa when interest rates were high, companies reduced their usage of long term debt across all sectors and instead used off balance sheet financing for vehicles, building and plant and equipment. In addition he concluded that industrial classification was a determinant of debt ratios as firms tended to have similar gearing ratios depending on their industry. This study was very limited in scope and did not delve beyond the outlined areas. In addition the study was premised on a stable developing economy and as such did not provide insights into a hyperinflationary environment.

Ramos (1998) in a study on capital structures and portfolio composition during the banking crisis in Argentina in 1995 looked at how banks rationalised their portfolio composition and capital structures following a period of financial distress. The study concluded that there was positive covariance between asset risk and banks own capital.

Banks were the only industry that the study considered whereas this study did not include financial institutions as it was felt that they belonged to a special area and their definition of capital structure differed significantly from that of corporates in other sectors.

Medeiros and Daher (2001) in a study entitled Testing The Pecking Order Theory of Capital Structure in Brazilian Firms looked at capital structures of 132 listed companies in Brazil. The objective of the study was to test if the Pecking Theory applied to the Brazilian firms. In their findings they concluded that the Pecking Theory in its weak form was applicable to Brazilian firms but did not hold in its strong form. Their analysis also showed that the goodness of fit of the Brazilian regression was significantly better than those reported for American firms and that Brazilian firms seemed closer to the Pecking Order's strong form than the American ones. This study goes beyond just looking at Pecking Order and tests other finance theories and also seeks to understand capital structures in a hyperinflation environment.

In conclusion, an overview has been provided into how companies select the optimal capital structure but most of the prior research that has been done on LDC's has been conducted in stable developing economies and as such, did not provide insights into a hyperinflationary environment such as the one that Zimbabwe is currently experiencing. None of the literature that has been reviewed shows that research has been conducted for a specific country and the previous research has focussed on stable economies. This research is therefore different in that it considers capital structures for a specific LDC country, Zimbabwe, which is an abnormal macro environment.

The next chapter defines hyperinflation and also gives some background about the Zimbabwean economy.

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## **CHAPTER 4: HYPERINFLATION AND BACKGROUND ON ZIMBABWEAN ECONOMY**

### **4.1 Introduction**

The chapter provides a definition of hyperinflation and also provides some background on the Zimbabwean economy and highlights the key issues that have confronted the private sector during the period 1998 to 2007. The definition of hyper inflation is provided to help understand the analysis which follows in the findings section.

### **4.2 Hyperinflation**

Broadly, inflation is described as the rate at which the general level of prices for goods and services is rising, and subsequently, purchasing power is falling. There has been considerable debate of what rate would qualify to be termed as hyperinflation. Mohr (2000) describes hyper inflation as a persistent increase in prices and also as a complicated, dynamic process which can be analysed in a number of different ways one of which is the imbalance between claims and contributions to the national economy. Mohr (2000) argues that inflation is not an economic phenomenon but a political and economic problem.

The dominating theme in inflation theories is that there is a clear correlation between prices and money supply. Literature not only provides a large body of evidence that this link does exist but also goes further to suggest that money supply appears to be the root



cause of inflation (Cagan, 1956; Sargent, 1982; Edison, 1983; Deane & Pringle, 1994; Debelle & Fischer, 1994).

It is important to note that there is a difference between chronic cyclical inflation and a steady ongoing inflation, which is usually referred to as hyperinflation. Chronic cyclical inflation is defined as the state of continually rising prices in the economy while hyperinflation is often described as the state when inflation is proceeding at abnormally high rates. Lafalaise (2002) defines hyperinflation as any rate which is higher than 80% per month. Cagan (1956) suggests a purely “arbitrary” definition: the period with monthly inflation rates of 50%.

The IMF (2001) published a report with a list of countries whose rate was defined as hyperinflation. Zimbabwe is one of the countries which are cited in the IMF report as experiencing hyperinflation. We have accepted the definition of hyperinflation as high sustained inflation which is higher than 80% on year on year basis. The latest year-on-year unofficial inflation figure which is for October 2007 was 14841% and a month on month figure of 136% consequently the highest in the world (Zimbabwe Independent). The Central Statistical Office has not produced an updated figure due to the consumer goods shortage triggered by price controls making computation difficult.

This study does not intend to delve into the debate of what rate would be accepted as hyperinflation as this is not the main focus of the research and simply uses 80% as the cut-off.

The reason for doing so is to determine whether there are differences in the manner companies finance operations under hyperinflation.

Whittington, Saporta and Singh (1997) concluded that hyperinflation can cause significant distortion on the corporate finance patterns of firms and employed a method of adjusting the inflation accounts for companies in Turkey for the period 1982-90. They concluded that the figures that they obtained gave a better and more realistic picture of company performance than the unadjusted historically stated financial statements. Based on this analysis Whittington et al. (1997) concluded that corporates operating in a hyperinflationary environment tended to rely more on external finance for growth than internal finance and also that companies relied on the issuance of new shares to a large extent. This conclusion was in support of previous findings by Singh and Hamid (1995) and contradicted the Pecking Order Theory, which states that companies first of all use internal funds for growth before seeking external sources. To enable the same understanding, this study used inflation-adjusted accounts that were presented by the target companies in Zimbabwe.

In a recent study, Chamisa (2006) concludes that Zimbabwean investment analysts are not using inflation-adjusted accounts in their evaluation of listed companies. According to Chamisa (2006), the analysts perceive information provided by hyperinflation-adjusted financial statements to be of little use and they posit that company executives have limited understanding of hyperinflation adjustments and generally think that the value of these adjustments is not commensurate with the cost of making such adjustments. The

actual use or perceived use of hyperinflation-adjusted accounts by capital markets in emerging markets has not been well researched (Chamisa, 2006:5). This therefore suggests that there has been little research on capital structures for companies operating under hyperinflation. The lack of knowledge provides an opportunity for this study to give some insight into how companies finance their operations under hyperinflation and whether capital structure theories as previously stated are applicable. Chamisa's (2006) research was primarily directed at understanding the usage of hyperinflation-adjusted financial statements while this study utilises inflation-adjusted accounts to analyse the capital structures of selected corporates in Zimbabwe.

The next section provides a brief background about the Zimbabwean economy, which helps to understand some of the external factors that have influenced the way companies have operated.

### **4.3 Background on the Zimbabwean Economy**

The Zimbabwean economic decline has been gradual over the years with the adoption of socialist policies in the eighties and the subsequent adoption of the IMF prescribed Economic Adjustment Programmes in the nineties which proved detrimental and escalated the decline. The country experienced a major drought in 1995, which resulted in the destruction of the crop yields, and during the same year the International Monetary Fund (IMF) suspended balance of payments support due to policy differences with the government. The economic decline trigger point was what is commonly referred to as the 'Black Friday' which was on the 14<sup>th</sup> of November 1997 when the currency declined by

75%. The Central Bank had to suspend trade in the currency to prevent further decline. This is largely attributed to two factors i.e. the awarding of Z\$50,000 unbudgeted for gratuities to liberation “war veterans”. (Equating to USD\$ 2800 each then and payouts of ZD\$2000 monthly pensions for life). This triggered an economic crisis that was already looming as evidenced by the slowdown in GDP growth. The payouts were funded through printing money which is a major inflation driver via increased money supply. The second factor was the announcement by the Government of the implementation of the 1993 Land Redistribution Act, which stipulated the redistribution of 1500 white commercial farms (Source Political Reawakening in Zimbabwe, Peter Bond 1999)

The anticipated economic decline with the increased money supply growth triggered high levels of inflation and plunged the economy into further decline. Further, the economy suffered from a lack of domestic investment given that returns were less than the rising rate of inflation. In 1998 the economy grew by a sluggish 1.6% compared to previous growth rates of 3.2% and 7.6% which were experienced in 1997 and 1996 respectively. The main factor that affected the low growth rate in 1998 was the below par performance of the key sectors of the economy: agriculture, mining and industry.

Appendix 1 shows the levels of inflation, which the country has experienced as from 1998 right up to 2006. By the beginning of 1998 the country’s year on year inflation (y-o-y) was 24% and continued to worsen from this level. World commodity prices collapsed during 1997 and 1998, which in turn affected foreign exchange inflows.

Against this background, the Zimbabwean government embarked on a borrowing spree which effectively “crowded out” the private sector and forced interest rates to rise. Government spending was financed through issuing long term bonds whose interest yield meant an increase in domestic debt. This resulted in a contraction of the economy with industries being forced to shed labour and downsize their operations. Decisions by corporates to finance growth as from 1998 were therefore influenced by the prevailing macroeconomic environment that has continued to worsen to date. These decisions tended to favour debt, which is the usual trend in a hyper inflationary environment if cheap debt is available as the costs of leverage, are offset with the loss of value of money due to inflation.

#### **4.4 Literature Review Summary**

In concluding the literature review it is noted that the subject of capital structures dates back to the Miller and Modigliani (1958) paper and that since then a lot of work has been undertaken to understand better how companies are financed. The IFC has funded several studies that have been targeted at Least Developed Countries seeking to build a knowledge base on how companies operating in these countries are financed as well as how their capital structures are organised. Findings to date indicate that corporates in developing countries tend to rely more on external finance to support the growth of their assets and that this external finance is equity related which is different from the observation of corporates in developed countries who tend to use debt finance to grow the business with equity finance accounting for a very small portion of sources of external

finance. A few studies have been done on corporates operating under extreme hyperinflation.

All previous studies of LDC capital structures used historical cost accounting until Whittington et. al (1997) applied the Constant Purchasing Power method to adjust accounts for hyperinflation. Whittington et. al analysed the capital structures for Turkish companies using the CPP method and found out that the financial ratios were distorted by hyperinflation.

It was found that companies in Zimbabwe since 2000 have been presenting both inflation adjusted accounts and historical cost accounts. For the purpose of this study, inflation adjusted accounts were used for the analysis of capital structures and in the next section we present the methodology that was applied.

## **CHAPTER 5: METHODOLOGY**

### **5.1 Introduction**

This chapter provides an outline of the methodology that was used to conduct the research. A detailed presentation is given to justify why a particular approach was used and also the shortcomings of the given approach. The study was conducted using both quantitative and qualitative techniques. Quantitative techniques were employed in dealing with the data that had been obtained from the financial statements of the companies that were studied while qualitative techniques were used mainly in the reviewing of literature to support the theoretical framework of the research as well as the analysis of the annual reports of the companies being studied.

Out of the total of seventy five companies that are listed on the ZSE, eight companies were selected for the analysis. The companies were inserted into the following categories; industrial and processing sector, mining sector, hotels and leisure sector, telecommunications sector, food retail sector. The financial services sector was not included in the analysis due to the fact that capital structures were mainly driven by regulatory requirements from the Reserve Bank of Zimbabwe and therefore the patterns that emerged might not have been as a result of choices by management. The selection of the companies was random. A background of the companies that were selected is provided in the section that deals with the analysis.

Included in this chapter is a description of the research process followed by a discussion of the research design and then a discussion of the research plan as well as the data collection methods. Using the data that was available the following determinants of capital structure were analysed-size, tangibility, profitability and non-tax debt shield. It is important to briefly summarise the theoretical framework about these variables and also select the correct proxies for them.

## **5.2 The Variables**

### **5.2.1 Profitability**

Capital structure theories do not provide the same prediction on the issue of profitability. While the trade-off, signalling and agency theories predict a positive relationship between profitability and leverage, the pecking order theory predicts a negative relationship. For the purposes of the study, (Earnings Before Interest and Taxes) EBIT was used as the proxy for profitability.

### **5.2.2 Non-Debt Tax Shields**

Trade off theory is the only capital structure theory, which deals with the effect of taxation on gearing. In brief, the theory says that as the tax liability increases companies tend to increase their debt. However, it must be noted that there is no single top tax rate in any given year and therefore this cannot serve as a good measure for taxation and therefore non-debt tax shields will be used instead. Under the non-debt tax shield we understand the tax deduction for depreciation and investment tax credits. Since non-debt tax shields are substitutes for the tax benefits of debt financing (the deduction of interest



expenses from taxable income) a company with larger non-tax shield, *ceteris paribus*, is expected to use less debt. In other words, one expects a negative relationship between non-debt tax shield and leverage. The proxy used for non-debt tax shield is depreciation over total assets.

### **5.2.3 Tangibility**

The trade off and agency theories state that tangibility is positively related to gearing. The rationale behind this is that the greater the tangible assets that a company has the more its ability to raise secured debt, which is generally cheaper than, unsecured borrowings. In any case the value of tangible assets should be higher than intangible assets in the event of bankruptcy. Companies with significant tangible assets have historically been able to attract investors alternatively they should be able to raise capital to finance operations. As discussed previously, the pecking order theory leads us to a different conclusion due to the fact of lower information asymmetry for firms with higher tangibility of their assets. In the case of this study, the ratio of tangible assets to total assets is selected as a proxy for tangibility of assets.

### **5.2.4 Size of the Firm**

Size of a firm tends to be an inverse proxy of the probability of bankruptcy of a firm. Small firms with low and irregular cash flows face a high possibility of bankruptcy while larger firms due to their diversified and more stable cash flows tend to have lower risks of bankruptcy. In line with the trade off theory, size is expected to be positively related to leverage. Rajan and Zingales (1995) argue that this positive relationship will not be

strong if the costs of financial distress are low. A positive relationship of size and leverage links up with the agency theory which argues that bigger firms are able to borrow at lower costs and have easier access to capital markets because of information asymmetry. In line with the majority of previous studies we have used the natural logarithm of sales to capture the size effect on the leverage of firms and by doing so, we imply that size effect on leverage is non linear.

### **5.3 Research Process**

A detailed literature review was undertaken in order to be informed about previous work that has been done on the effects of hyper-inflation on capital structures. During the literature review, definitions of key research themes were provided to assist in an understanding of the subject at hand. The literature review set boundaries for the research.

The research went back as far as 1998 and financial statements of the targeted companies were collected and captured. Annual reports of the selected companies were reviewed as they provided some commentary and notes to the financial statements which was used in the research and assisted in the understanding of how capital structures had evolved during a hyper-inflation environment. Notes to the financial statements were important in that they provided insights into how various items on the financial statements had been computed. The financial statements of the eight companies which were studied are at Appendix 3. Inflation adjusted accounts were provided by the selected companies using accounting standard IAS29. Companies in Zimbabwe have been presenting final year end accounts with both historical cost accounting and inflation adjustments on a voluntary

basis up until the Zimbabwe Stock Exchange insisted that all listed companies had to comply with IAS29. Unlike Geoffrey Whittington et al 1997, this study utilises the inflation adjusted accounts to arrive at conclusions about the effects of hyper-inflation on capital structures.

Consumer price index figures (year on year inflation) were collected from 1998 and are shown at Appendix 1. The data was provided from the Zimbabwe Central Statistics Office. This data was analysed and provided a framework which was used in the research to determine a cut off point when it was considered that there was hyper-inflation in Zimbabwe. The reason this was done was to enable a comparison of capital structures prior to and during hyper-inflation so as to arrive at conclusions.

## **5.4 Research Design**

A sample of eight different companies out of the seventy five listed ones was studied. The companies were allocated to different sectors as explained earlier. While it can be argued that the sectors that were allocated to the various companies are sometimes not unique and different, a criteria was used which looked at the key business area of the given companies and on this basis an allocation was made. The companies and sectors that were selected for the study are listed in the Table 2 below:

**Table 2 Summary of Sectors and Companies**

<b>1</b>	<b>Industrial and Processing Sector</b>  Astra Industries Limited Delta Corporation
<b>2</b>	<b>Mining Sector</b>  Bindura Nickel Corporation Limited Hwange Colliery
<b>3</b>	<b>Hotels and Leisure</b>  Zimbabwe Sun Limited TA Holdings
<b>4</b>	<b>Telecommunications</b>  Econet Holdings
<b>5</b>	<b>Foodstuffs and Retail</b>  Ok Zimbabwe Limited

A random sample of ten percent of the listed companies gave a reasonable insight about capital structures of Zimbabwean companies under hyperinflation. It is however, possible that conclusions arrived at in the research might not be fully representative of all the companies given the limitations in the selection of a random sample. This particular aspect will be examined during data analysis and relevant comments made depending on the findings. The next section discusses the different ratios that were analysed and the methodology used in the computations.

## **5.5 Capital Structures-Financial ratios**

One key ratio was analysed for each one of the companies under study. The ratio is debt to equity. A brief explanation is provided below on how the ratio was computed.

In addition to the above turnover and profitability trends were also analysed to assess the impact of the different capital structure scenarios on the value of the firm.

### **5.5.1 Debt to Equity Ratio**

Debt to Equity was determined by the formula:

$$\frac{\text{Total Debt}}{\text{Equity}}$$

Total Debt was defined as the sum of all interest bearing debt.

In addition the study examined short-term borrowings by the selected companies to determine whether there was a preference on usage of short term funding instead of long term funding given the hyper-inflation environment. In particular the research sought to establish the changes over time with respect to short term borrowings for the target companies.

## **5.6 Interest Rates**

Appendix 2 is a schedule of interest rates since 1998; the figures were obtained from records at the Reserve Bank of Zimbabwe and were later on used in the analysis. The Reserve Bank of Zimbabwe occasionally intervened and offered concessionary interest rates for companies in the productive sector. The study reviewed these interventions and critically examined their impact on capital structures.

## **CHAPTER 6: FINDINGS**

### **6.1 Introduction**

This chapter discusses the findings of the research and presents the results of the research. The chapter articulates the findings and analyses the following: each of the different companies within the selected sector, cross section analysis and an overall analysis of the sample of eight companies. The analysis is conducted to bring out the major insights which are discussed to answer the research questions and ultimately address the research objectives.

### **6.2 Company Analysis**

### **6.3 Industrial and Processing Sector**

#### **6.3.1 Astra Industries Limited**

##### **Background**

This company, originally known as Astra Holdings Limited, was founded in 1939 and was registered on the Zimbabwe Stock Exchange in 1974 under the conglomerate sector. During 2001, Astra Limited Group was demerged into three companies namely Astra Industries limited, Cairns Holdings and Tractive Power Holdings Limited now separately listed on the Zimbabwe Stock Exchange.

The group now comprises of Astra Chemicals (Pty) Ltd, Astra Industries Ltd, Astra Paints Division, Astra Steel & Engineering Supplies Division and Celmid (Pty) Ltd trading as Chemical Enterprises. The major shareholder with 65% is the Finance Trust of Zimbabwe, which is a subsidiary of the Reserve Bank of Zimbabwe.

## **Astra Analysis**

Astra's debt to equity ratio followed a downward trend indicating that the company was reducing debt from the period 1999 to 2006 as shown in Graph 1. Equity funding in a hyperinflationary economy tends to be a long and tedious process where the anticipated funding requirements are usually overtaken by inflation. This is evidenced by the company not conducting a rights issue or other stock market corporate activity as a means of raising capital, leaving retained earnings as the only sources of capital to fund the business.

The trade off theory is supported by the trend noticeable in 2001 when the firm started unwinding their debt as a result of the increased concern over financial distress arising from the increase in interest rates to levels as high as 900%. There is a marked decline in profitability and this resulted in the long-term debt level being reduced. The increase in interest rates is also evident in the spike in the interest paid between 2004 and 2005 and this supports the need for the shift from debt funding to retained earnings. The company suffered a loss in 2004 as a result of increased finance costs due to the above mentioned increase in interest rates.

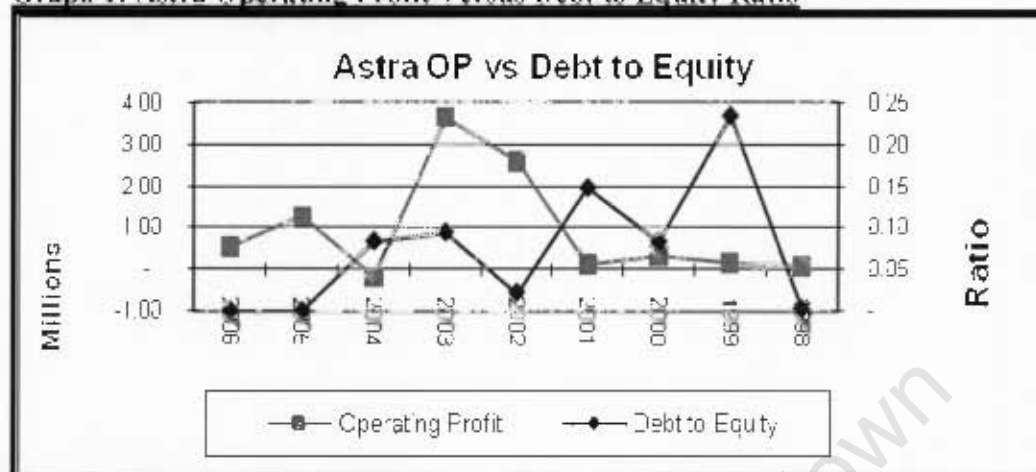
The pecking order theory where information between investors and management is asymmetrical was evident in the reduction of debt. In addition, the strategy to adopt a debt skewed structure was reversed as interest costs started to impact negatively and there was an evident decline in profitability especially in 2005 when the company made a loss.

The asset structure, considering the manufacturing nature of the business, shows that tangible assets constituted the bulk of the total assets of the firm in 1998. The trend changed thereafter until 2003, and started to increase again as shown in Graph 3. This explains why the company was able to borrow by leveraging off its assets during the period 1998 to 2000. The increase in tangible assets in 2003 can be attributed to appreciation in real value even in a hyperinflationary environment, and can be easily liquidated in the event of financial distress.

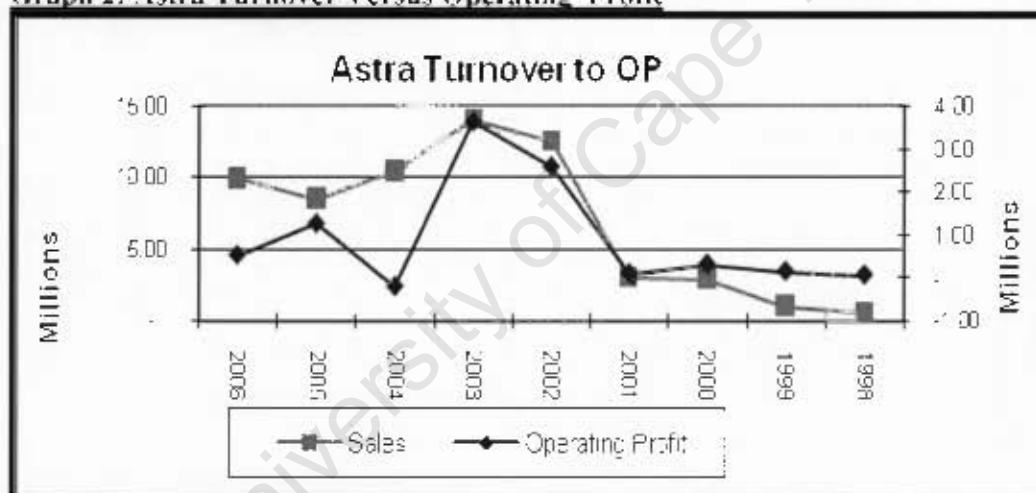
The increase in operating profit was in tandem with increase in turnover but the improvement in cash flow did not translate into increased long term debt. Most of the debt the company carried was very short term debt as depicted by the level of current liabilities.



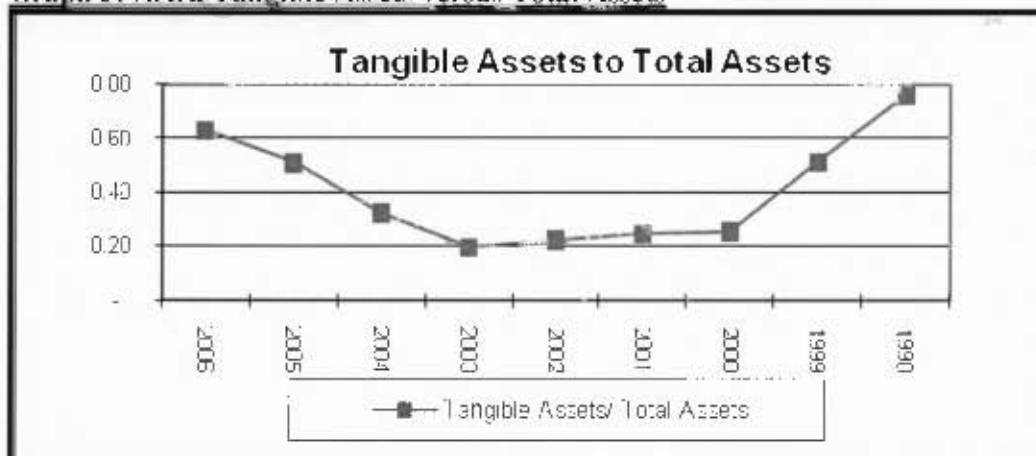
**Graph 1: Astra Operating Profit Versus Debt to Equity Ratio**



**Graph 2: Astra Turnover Versus Operating Profit**



**Graph 3: Astra Tangible Assets versus Total Assets**



### **6.3.2 Delta Corporation Limited**

#### **Background**

Delta is a holding company that was listed on the stock exchange in 1946. Delta was initially a conglomerate with shareholding in OK Zimbabwe a retailer, Zimsun an hotelier and Delta Beverages the main operation. These units were de-merged from the group to unlock value and focus on the main line of business, which is the beverages industry. The company's main operations are brewing, non-alcoholic beverages and agro-industries. The main business units are Delta Beverages, which is 100% owned as well as African Distillers an alcoholic beverage manufacturer, mainly spirits. African Distillers is 31% owned by Delta. Its major shareholders are Old Mutual Life Assurance Company with a 28.3% shareholding and SABMiller with a 36% shareholding. Delta has diversified through the acquisition of a controlling stake in another listed entity Ariston Holdings, which is an agro-processor.

#### **Delta Analysis**

Delta enjoys a blue chip status on the Zimbabwe Stock Exchange and is one of the largest companies on the ZSE in terms of market capitalisation. It is also the largest beverages company in Zimbabwe and competition is insignificant with Delta commanding the sole manufacturing and distribution rights of Coca-Cola in the country. The size and blue chip status gives it favourable finance options as banks compete to lend the company funds. Delta was hugely profitable from 1999 to 2001 as is depicted by Graph 5 below but there was a huge decline in the profitability thereafter. The total long term liabilities increased with the profitability and vice-versa. This was in conformity with the agency and

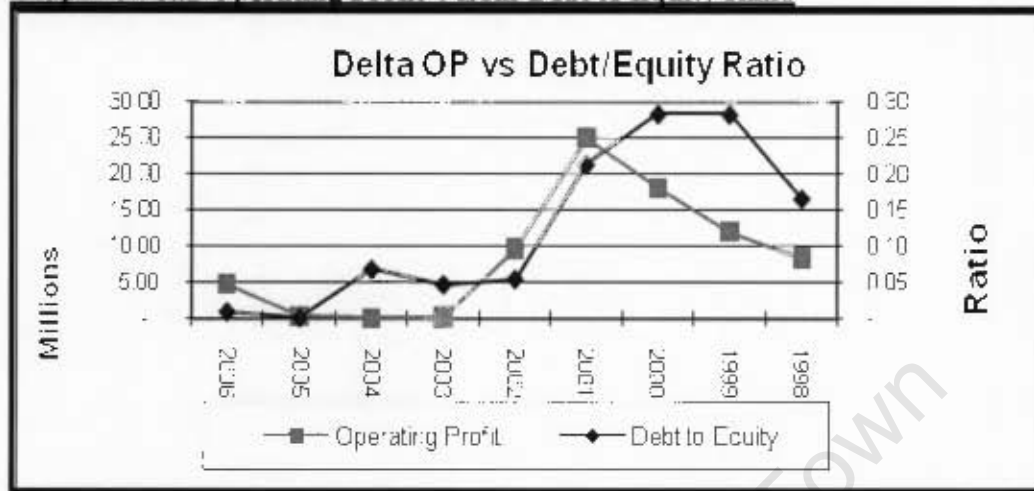
signalling theories, which predict a positive relationship between leverage and profitability.

The business primarily operates on a cash basis with huge cash flows and this also precipitated the increase in the debt carried as the bankruptcy costs tend to be lower for bigger firms with blue chip status and a consistent cash flow. This is in line with the advocacy of the agency theory where leverage is positively related to the size of the firm and consistency of cash flows. Though the company carried long term debt despite a serious indication of financial distress, Delta was able to access the Reserve Bank concessionary debt meant to stimulate economic productivity because of its blue chip status.

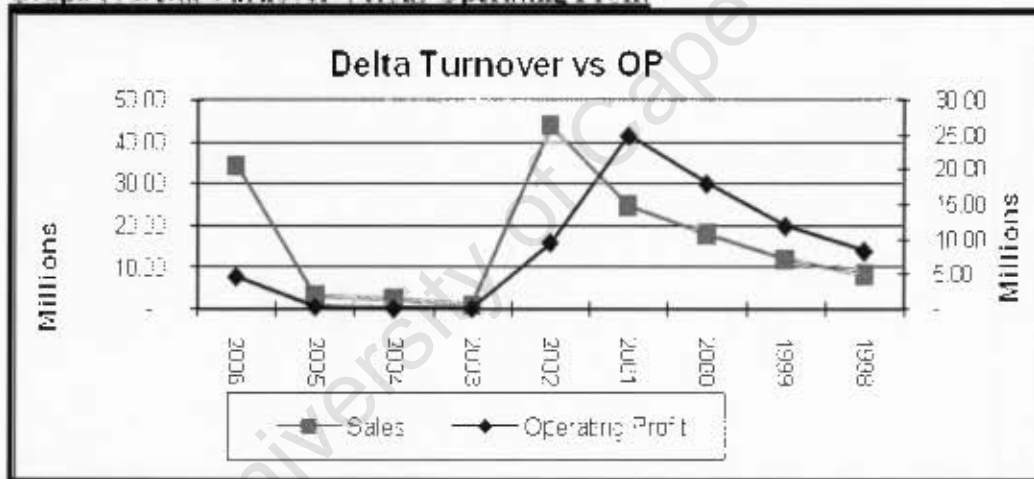
Short term debt was also significantly reduced between 2002 and 2003 as profitability dropped significantly. This reduction was in conformity with the signalling theory which predicts that management's capital structure decisions are a direct function of their outlook on profitability and the information they have at hand. The trade off theory was also proved true in that instance as the level of interest rates shot up and the cost of debt outstripped the potential benefits.

Delta operates huge plants and machinery which act as security and offer collateral enabling the company to access more debt. Most of the firm's assets are tangible thus supporting the trade off and the agency theory where gearing is positively related to the tangibility of the assets.

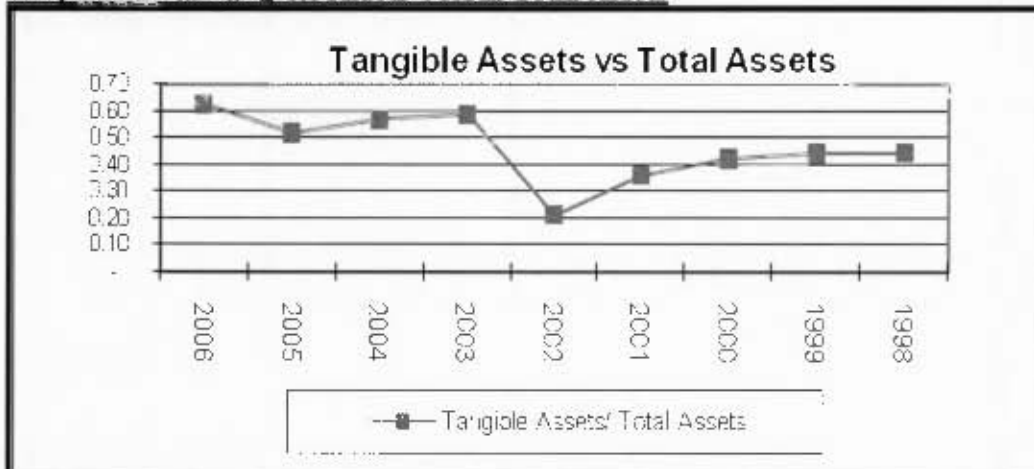
**Graph 4: Delta Operating Profit Versus Debt to Equity Ratio**



**Graph 5: Delta Turnover Versus Operating Profit**



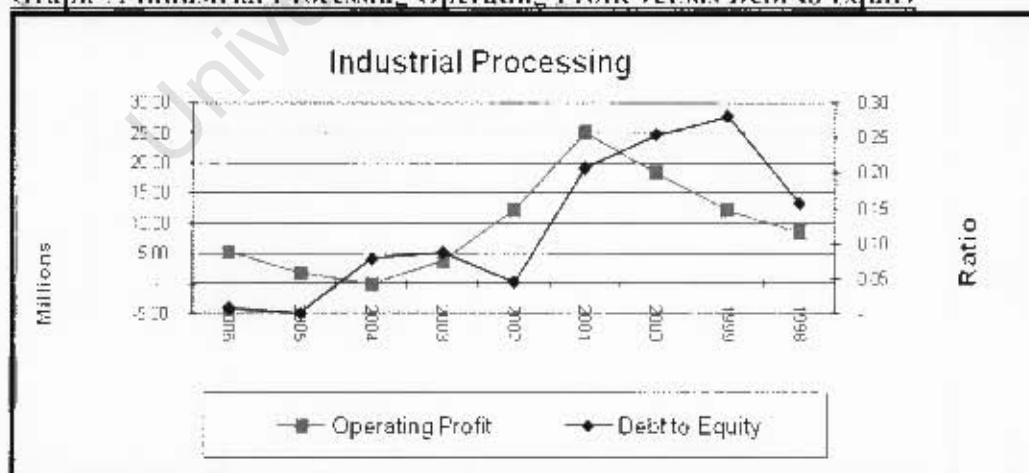
**Graph 6: Delta Tangible Assets Versus Total Assets**



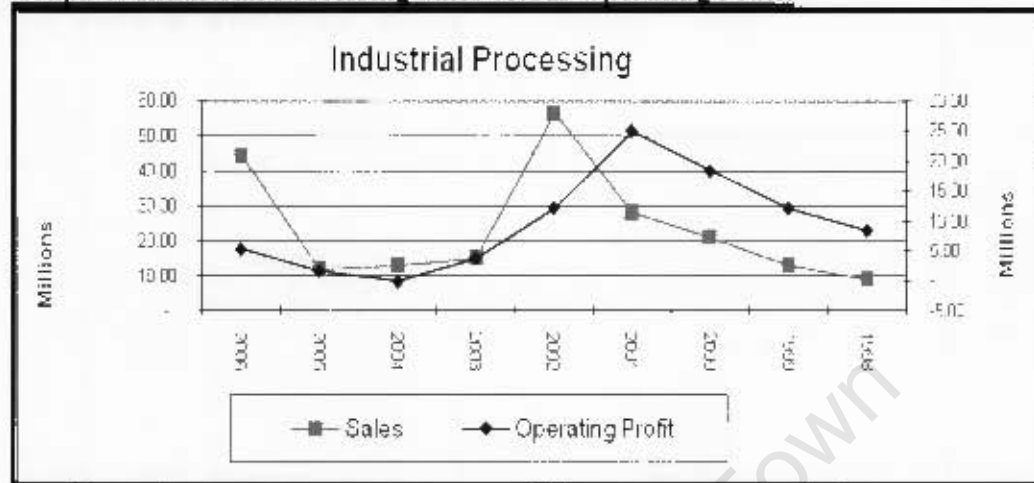
### 6.3.3 Industrial and Processing Sector Analysis

To conduct an analysis of the industrial processing sector, simple averages for the two companies, Astra and Delta were computed. From 1998 to 2000 the industries long term liabilities increased in tandem with debt. During the same period both revenue and profitability increased significantly, signifying the agency and signal theory, which state that the level of gearing a company carries increases in line with profitability. As earnings became uncertain due to the deteriorating macro economic environment which was characterised by high interest rates, hence high borrowing costs, the industry borrowed less. The asset structure of the industry shows that tangible assets constitute most of the total assets and are not correlated to debt, which is in contrast to the key predictions of the trade off theory. The industry enjoys the ability to borrow and secure the borrowings with tangible assets.

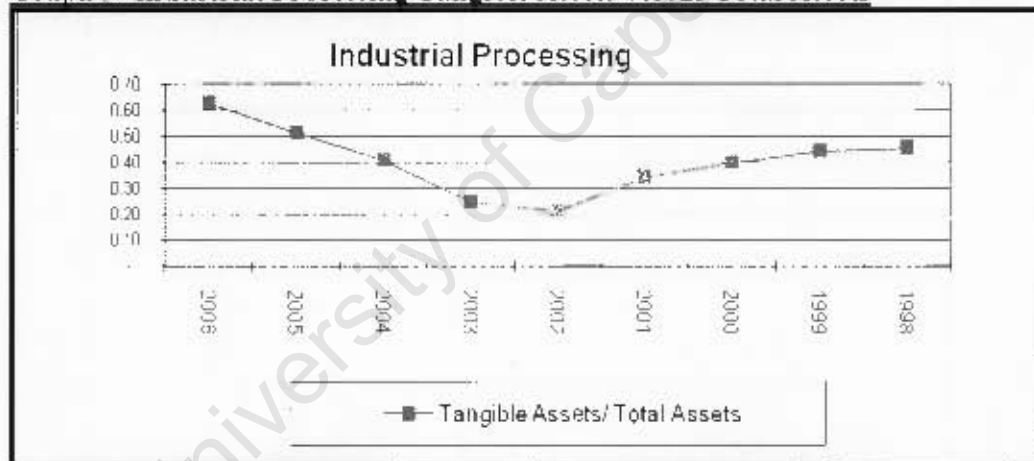
Graph 7: Industrial Processing Operating Profit versus Debt to Equity



**Graph 8: Industrial Processing Sales versus Operating Profit**



**Graph 9: Industrial Processing Tangible Assets versus Total Assets**



## 6.4 MINING SECTOR

### 6.4.1 Bindura

#### Background

Bindura Nickel Corporation (BNC) was formerly part of the Anglo-American stable before being sold to a consortium of African businessmen, trading as Mwana Africa.

BNC is the largest producer of nickel in Zimbabwe, with two active mines Trojan Nickel Mine and Shangani Mine. In addition to its own mines, the group also undertakes toll refining for a number of third party nickel miners both local and regional. Toll refining normally contributes approximately 5% of total revenues.

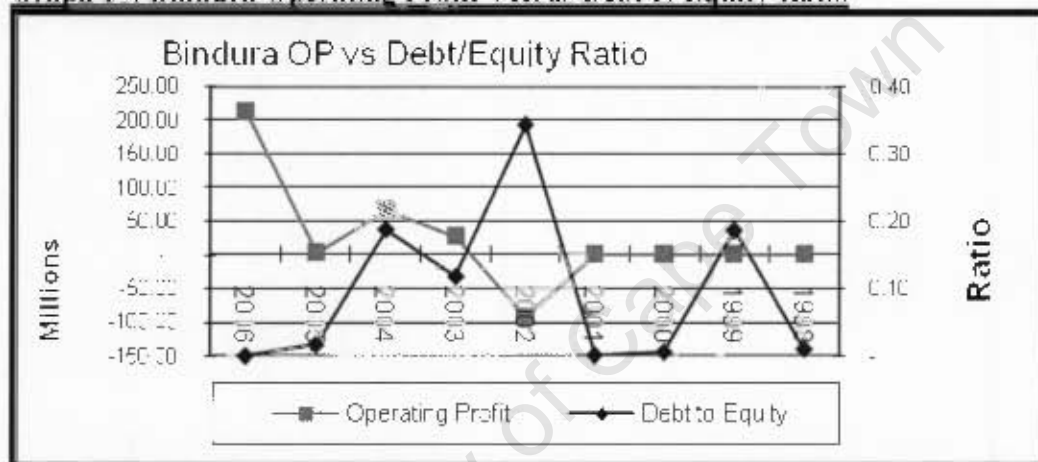
### **Bindura Analysis**

The main revenue stream for Bindura comes from exports of nickel which is susceptible to changes in world prices. The exchange rate is also a factor in determining the level of earnings. This has been a major challenge in Zimbabwe for the company. The company did not undertake any rights issue or corporate action related to equity as a finance mechanism as evidenced by the shares in issue which remained at 126 million from the year 2000 to date.

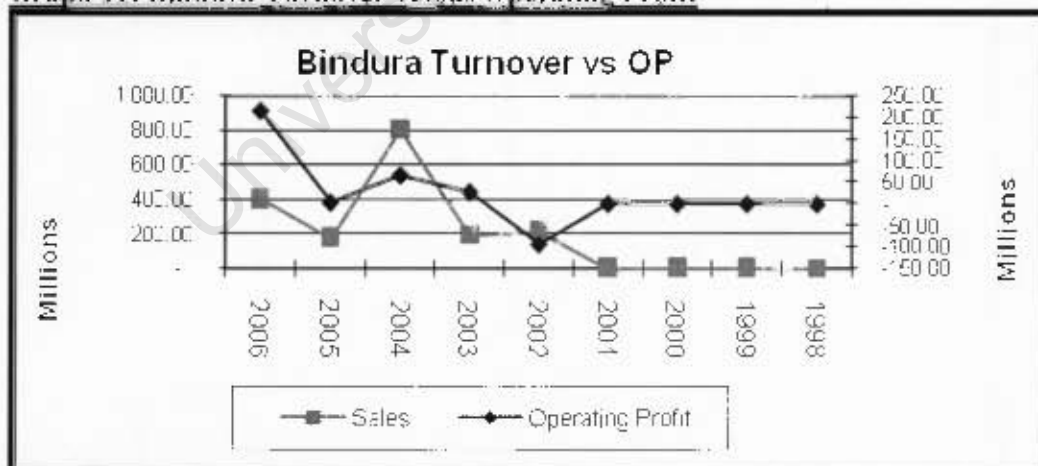
The operating profit showed a lot of volatility during the period under consideration even though it has been at break even point for most of the period. There is a noticeable trend between 2000 and 2003 where profitability and leverage moved in opposite directions. As the company sank deeper into a loss position the level of debt was increasing. This is in direct defiance to the signalling and agency theories which predict a positive relationship between leverage and profitability. The trade off theory in its weak form was proved true though as the strategy adopted by the company to carry debt despite reduced profitability over a sustained period of time proved that the cost of debt and the increased risk of bankruptcy were outweighed by the benefits of carrying the debt. The tangibility of its assets also contributed to the level of debt the company carried.

According to press reports the company's ore reserves are estimated at USD 2 billion and these tangible assets enabled the company to access long term debt. The graph below indicates that there was no correlation between the level of debt the company carried and profitability as the two moved in different directions.

**Graph 10: Bindura Operating Profit Versus Debt to Equity Ratio**

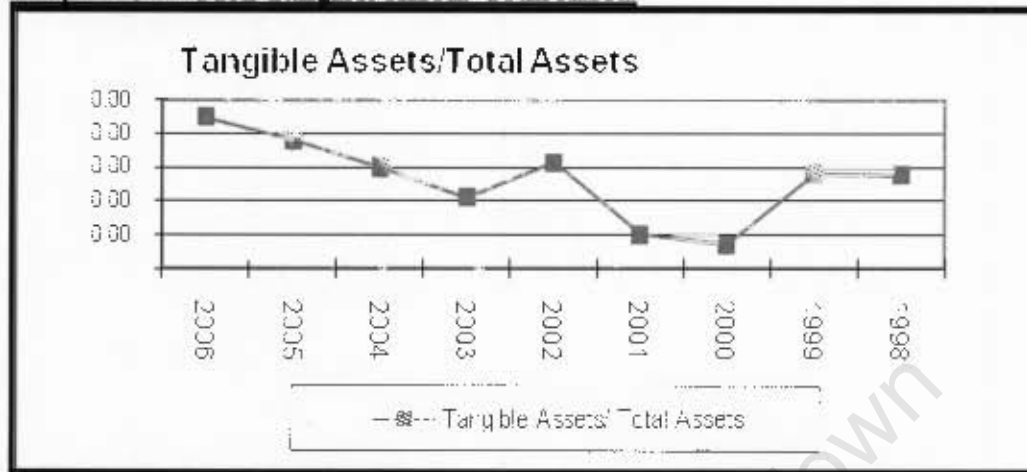


**Graph 11: Bindura Turnover versus Operating Profit**





**Graph 12: Bindura Tangible Assets/ Total Assets**



## 6.4.2 Hwange Colliery Company Limited

### Background

The company's origins date back to April 1899 when the then Wankie Coal, Railway and Exploration Company were registered, and were reconstructed in 1909 as Wankie Colliery Company Limited. The company is currently registered on the Zimbabwe, London and Johannesburg Stock Exchanges. The company changed its name to Hwange Colliery Company in the last quarter of 2007. Hwange is the leading Coal Producer in Zimbabwe mainly involved in Open Cast Mining, Processing, Underground mining and also operates a Coke Plant. About 72% of all the coal mined at Hwange goes towards meeting Zimbabwe's energy needs.

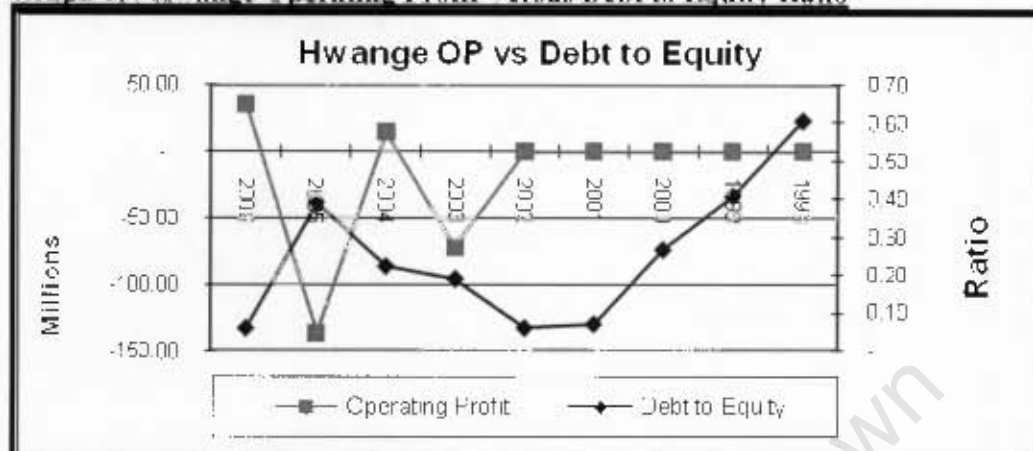
### Hwange Analysis

The largest shareholder in Hwange is the Government of Zimbabwe. The company has continued to haemorrhage in terms of profitability as depicted by graph 13 below. The

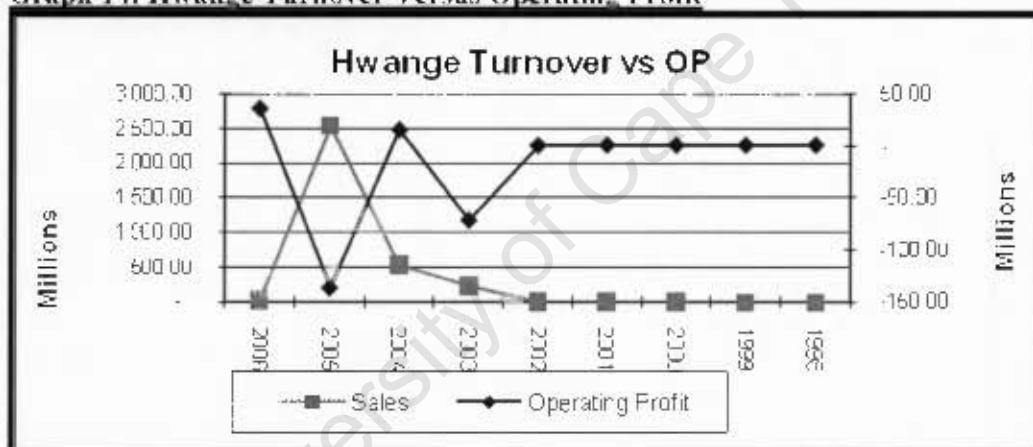
firm has barely made profit for most of the period from 1998 to 2005. The level of debt was significantly high as evidenced by a debt to equity ratio of 1.6:1 from 1998 to 2002. This skew towards debt defies the agency theory and the signalling theory, which predicts a positive relationship between debt and profitability, was sustained as a result of the fact that most of the debt carried was from the major shareholder which is the Government of Zimbabwe. The level of debt was, however, significantly reduced between 2002 and 2003 as shown by the debt to equity ratio which fell to 0.4:1. The ratio on the graph below indicates a level of 1 between 2003 and 2004 before a small portion of long term debt was carried. The trend, however, showed signs of reversal as the level of leverage started increasing as the company's profitability position improved between 2005 and 2006, which supports the agency and the signalling theories, though at a much slower pace.

Hwange's main assets are heavy machinery as well as biological assets in the form of coal reserves. The tangibility of these assets was not the reason why the company was able to carry debt despite sustained losses, the principal shareholder which is the government, provided the debt. In conformity with the pecking order theory, which predicts that debt is the least preferred form of financing, the company started unwinding their debt as profitability significantly improved between 2005 and 2006. The debt to equity ratio decreased from 0.4 to slightly below 0.1 as shown in Graph 13.

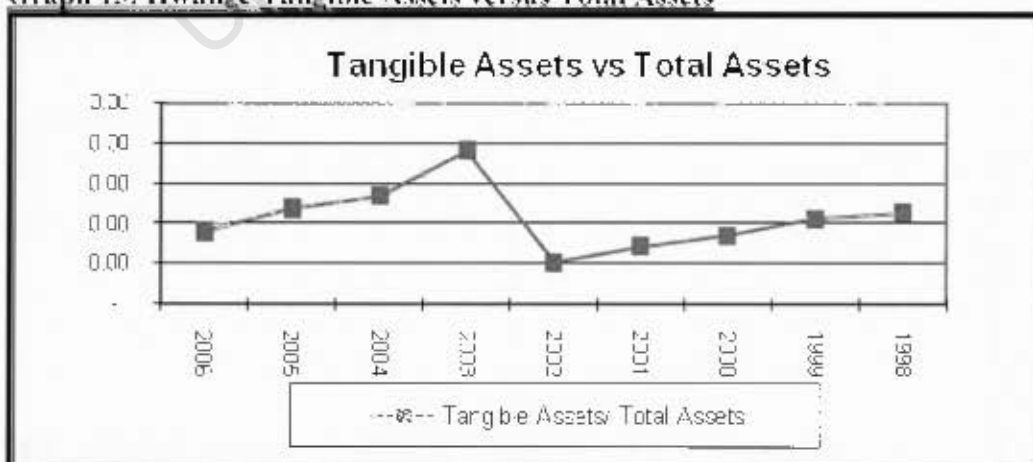
Graph 13: Hwange Operating Profit Versus Debt to Equity Ratio



Graph 14: Hwange Turnover Versus Operating Profit



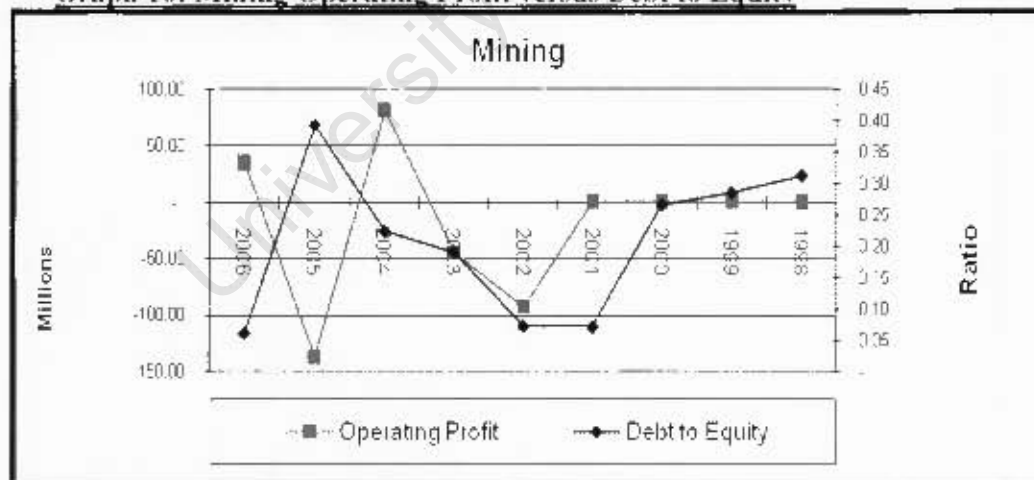
Graph 15: Hwange Tangible Assets versus Total Assets



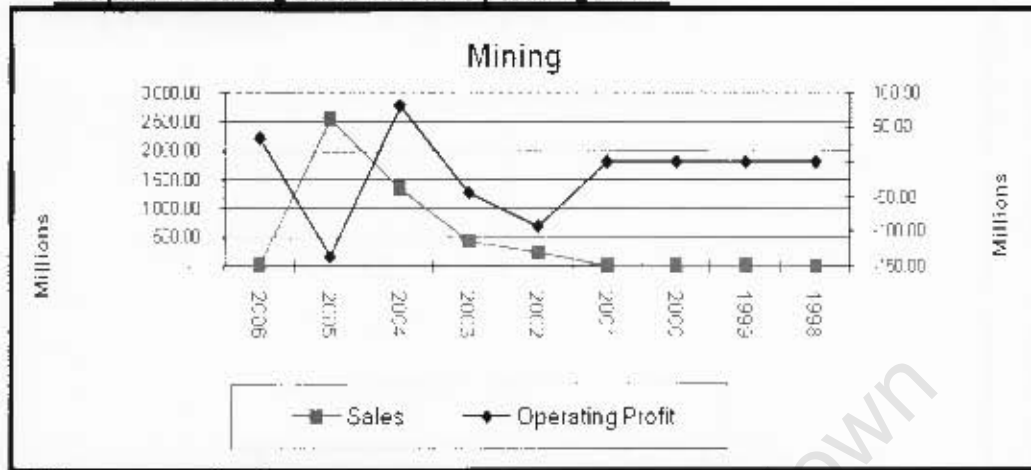
### 6.4.3 Mining Sector Analysis

Hwange and Bindura were assessed in the mining industry analysis. The mining industry faced a lot of volatility. The sector's debt is directly linked to the tangible assets as indicated in Graph 16 and Graph 18 respectively, supporting the trade off and agency theory. However, from 2003 on to 2006, a negative relationship exists between gearing and profitability, which is a strong signal that the financing structure changed. The mining industry showed a huge reduction in debt to equity ratio due to some corporate action in the form of equity finance, which was raised in 2000 and 2005 by Hwange. The industry involves a lot of heavy machinery and is capital intensive, which was previously exclusively financed by debt, but later diluted by equity as the costs of debt began to rise as shown by the losses in operations, this supports the pecking order theory.

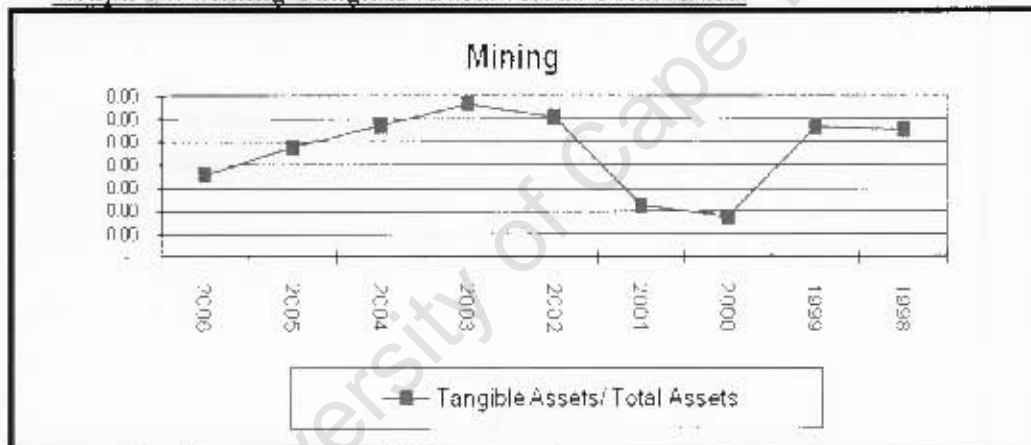
**Graph 16: Mining Operating Profit versus Debt to Equity**



**Graph 17: Mining Sales versus Operating Profit**



**Graph 18: Mining Tangible Assets versus Total Assets**



## 6.5 HOTELS AND LEISURE SECTOR

### 6.5.1 Zimbabwe Sun Limited (Zimsun)

#### Background

The group operates in the leisure industry and is an owner/operator of a number of resorts, hotels, casinos, timeshare operations and lodges throughout Zimbabwe. It also owns a timeshare operation in Mozambique (Archipelago Sun) and has a management

contract with a city hotel (The Grace at Rosebank) in South Africa. It was first established in 1968 as a division of Delta Corporation Limited and after restructuring in 1990 was converted into a public company and listed on the Zimbabwe Stock Exchange and is the largest leisure orientated company in Zimbabwe. The company then demerged from Delta Corporation in January 2002.

Each of the hotels and resorts offer a unique combination of leisure products catering for a diverse range of tastes including safaris, fishing, golf and bird watching. The group's properties cater for both the business and leisure traveller and have been home to most visiting international sporting personalities, teams and conferences.

### **Zimsun Analysis**

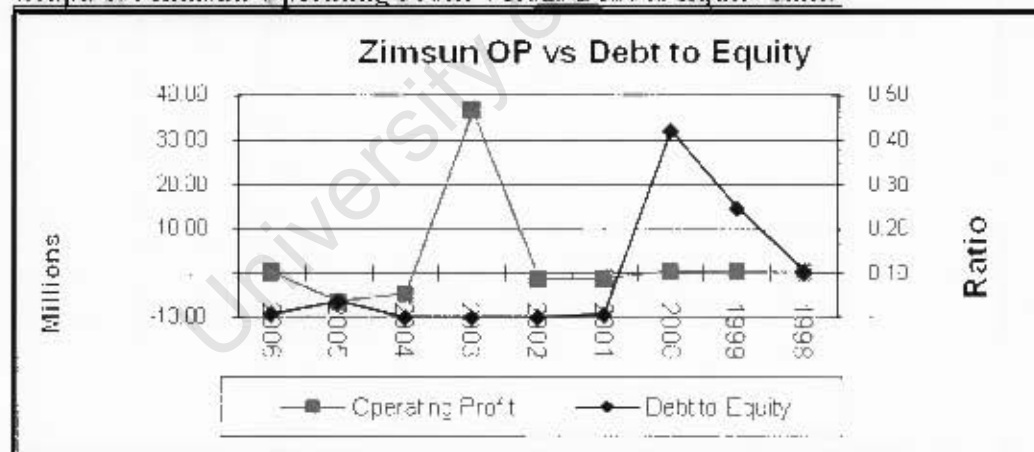
The tourism sector in Zimbabwe has been hard hit by the political instability in the country and this has resulted in a decline in tourist arrivals as well as a shift from international tourists to domestic tourists and business conferences, which both have previously been the major drivers of revenue for Zimsun. The major capital requirements over the years have been for hotel refurbishments and well as purchase of Information Technology infrastructure.

The dominant financing strategy for the group was the use of retained earnings. This was in conformity with the pecking order theory, where debt is the least preferred form of funding especially when earnings are uncertain. This decline and switch from debt to retained earnings was triggered by the increase in interest rates. This switch supported the trade off theory where capital structure decisions are influenced by the level of

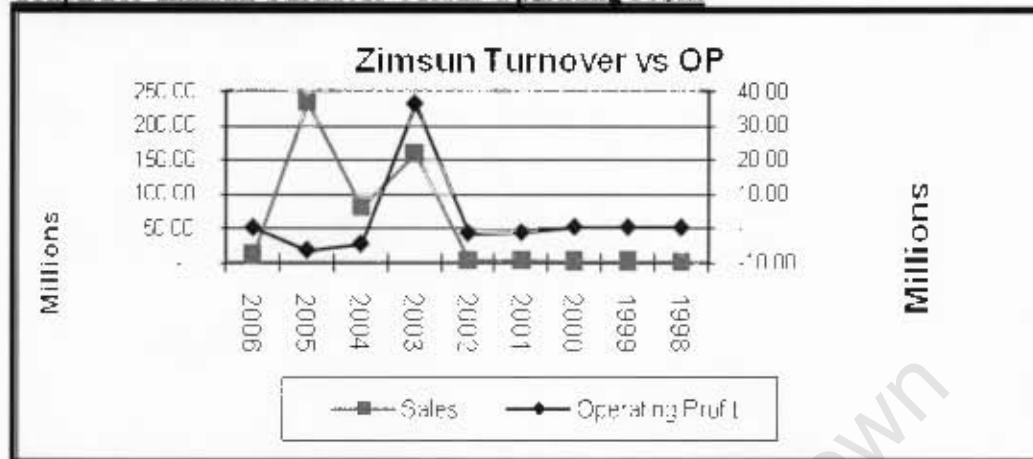
profitability and bankruptcy costs which also determine the level of debt an organisation is willing to carry. The rising interest costs coupled with the decline in tourist arrivals, determined the decision to reduce debt. The spike in profitability between 2002 and 2003, as shown in Graph 20, did not translate into higher long term debt levels, as shown in Graph 19, due to the challenging economic environment. The volatility of earnings as evidenced by the sharp decline in the net operating profit after tax between 2003 and 2004 is also indicative of the increase in interest rates.

The debt to equity ratio did not move in tandem with the profitability levels. The amount of debt carried was independent of the profit trend. The level of current liabilities increased between 2002 and 2003 as profitability was enhanced during that period.

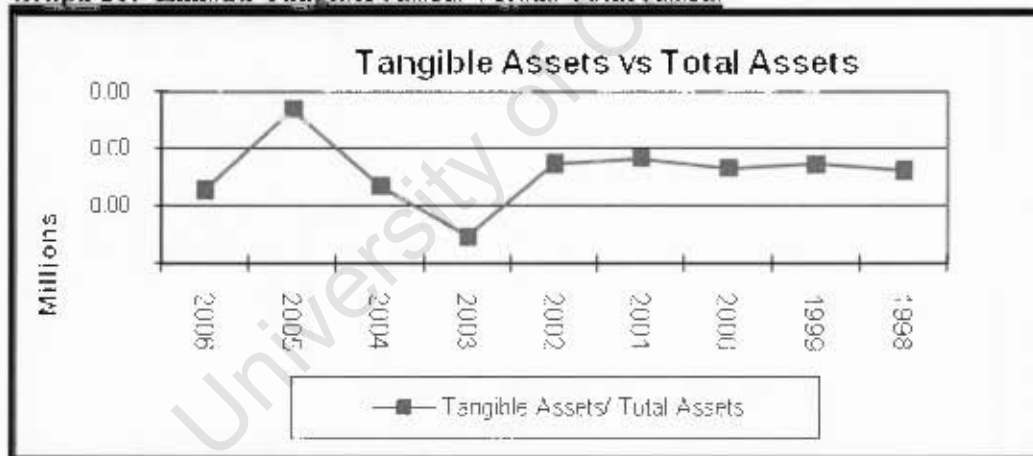
Graph 19: Zimsun Operating Profit Versus Debt to Equity Ratio



**Graph 20: Zimsun Turnover Versus Operating Profit**



**Graph 21: Zimsun Tangible Assets Versus Total Assets**



## 6. 5.2 TA Holdings

### Background

TA Holdings is a diversified investment company with interests in Tourism, Insurance and Chemicals among other sectors in Zimbabwe, Botswana and Uganda. The tourism arm runs the Cresta Hospitality Group of Hotels which are mainly city hotels targeted at



the business traveller. The insurance companies operate as Zimnat while the company controls a 30% shareholding in Sable Chemicals which is a Chemical manufacturing company based in Kwekwe Zimbabwe.

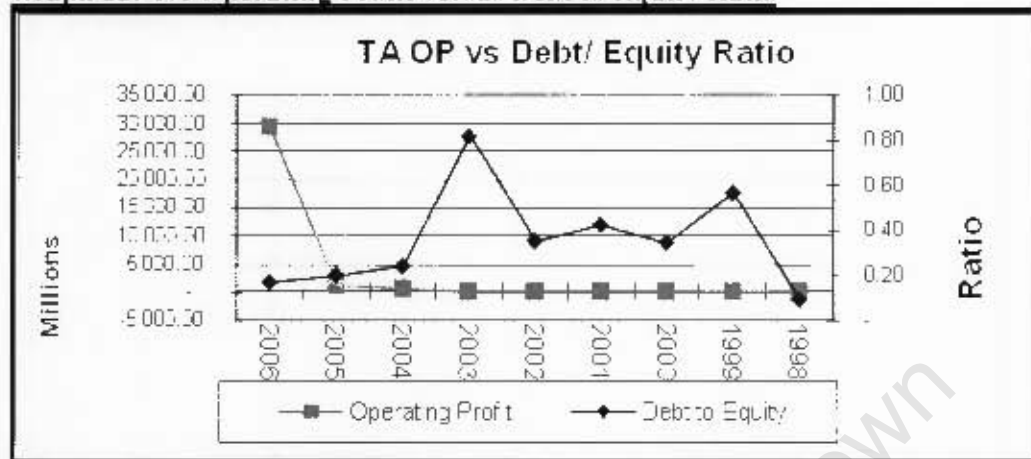
## **TA Analysis**

TA was geared from 1998 to 2003 with the spikes in borrowings occurring during 1999 and 2003, and operating profit was constantly lower, for the period 1999 to 2005, compared to 2006. The increase in profitability was contributed by other TA divisions. The trend contradicted the agency theory, which predicts a positive relationship between leverage and profitability, where the debt equity ratio significantly dropped in 2005 yet profitability went up during the same period. The company reduced debt in 2003 as shown in the debt to equity ratio downward trend in graph 22. No strong link exists between tangibility of assets and the debt that was raised for financing, indicating that other forms of financing were utilised by TA.

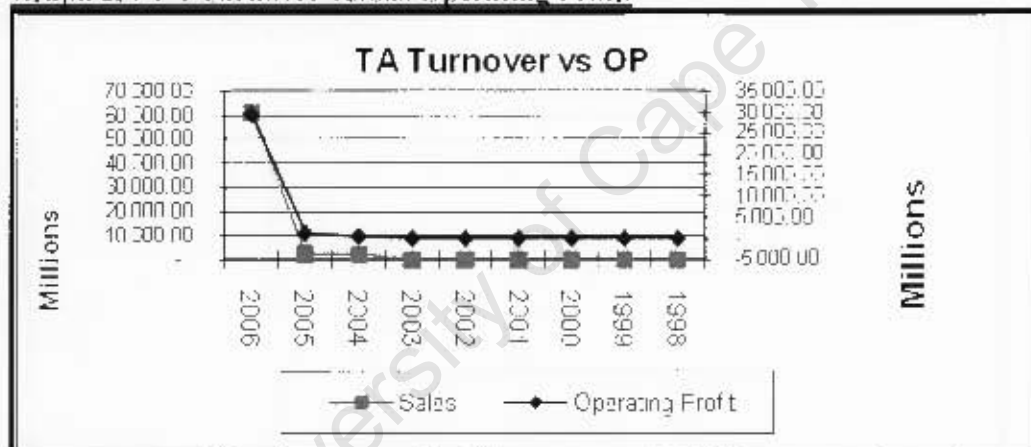
The company suffered a loss in net profit in 2004 as a result of increased finance costs due to the increase in interest rates. The reduction in debt also supports the pecking order theory, where information between investors and management is asymmetrical.

The trend in tangible assets was downward showing that tangible assets did not dominate the asset structure. This is attributed to the service nature of the group, which may be the logic behind reducing debt, which may have been more expensive because of the little collateral available.

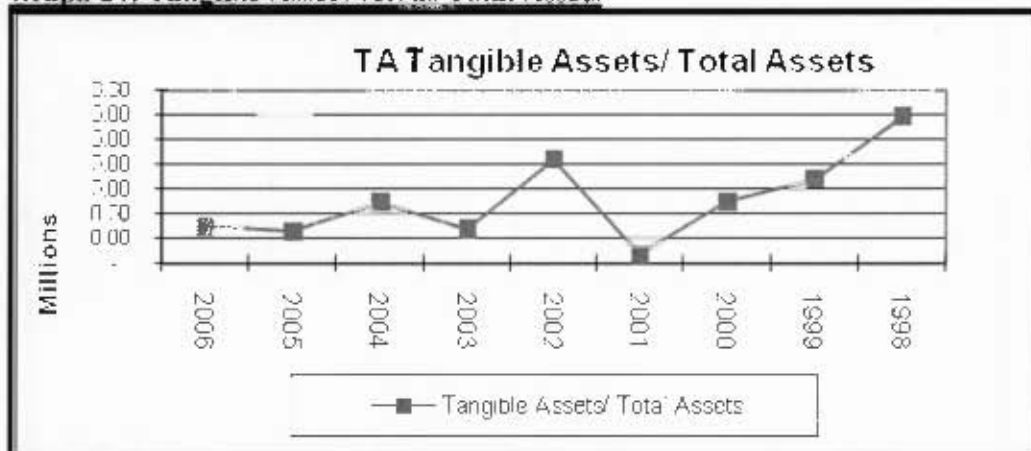
Graph 22: TA Operating Profit versus Debt to Equity Ratio



Graph 23: TA Turnover versus Operating Profit



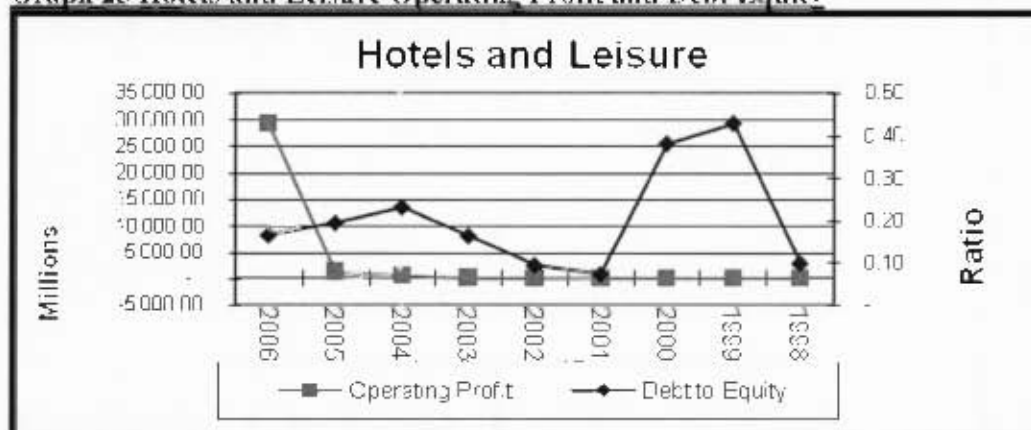
Graph 24: Tangible Assets versus Total Assets



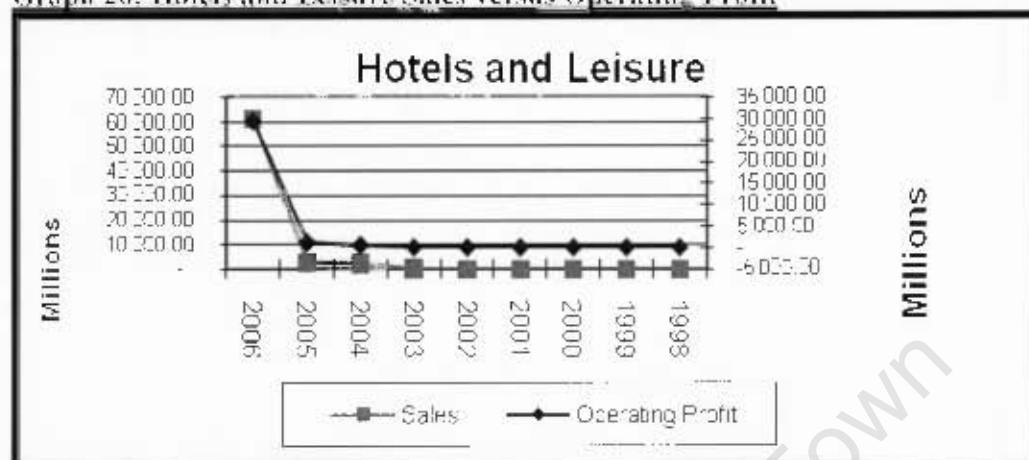
## Hotel and Leisure Sector Analysis

The hotel and tourism sector faced similar challenges to the other sectors and was hit hard by a decline in tourist arrivals where most of the revenue is generated. In 2001 and 2002 the industry made operating losses but profitability was stable for the remaining period reviewed, and rose significantly in 2006. Interest rates went up during the period and therefore increasing the cost of borrowing. Both factors influenced the decision to reduce debt as the industry began to look at other sources of financing. The debt to equity ratio peaked in 1999 as shown in Graph 25, however the outlook for the sector is a bit distorted by TA Holdings which operates other diversified companies in different sectors. Tangible assets were not directly linked to the debt as shown by Graphs 25 and Graph 26, which is in contrast to the trade off theory. Tangible assets to total asset ratio followed a downward trend due to the service nature of the hotel industry. Hotels financed their operations by debt funding in 1999 and 2000 where the gearing was higher compared to the other periods under review. However, there was a sudden shift to retained earnings, which supports the trade off theory where capital structure decisions are influenced by the level of profitability and bankruptcy costs.

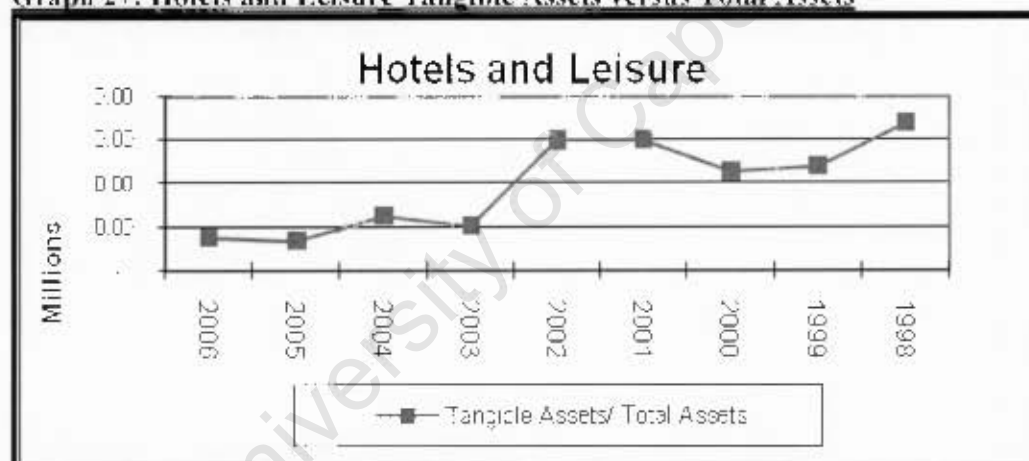
Graph 25 Hotels and Leisure Operating Profit and Debt Equity



**Graph 26: Hotels and Leisure Sales versus Operating Profit**



**Graph 27: Hotels and Leisure Tangible Assets versus Total Assets**



## 6.6 TELECOMMUNICATIONS SECTOR

### 6.6.1 Econet Wireless Holdings Limited

#### Background

Econet commenced its operations in July 1998 providing telecommunications products and services to its customers mainly consisting of basic pre-paid and contract cellular packages; internet access and transaction processing services. Econet Wireless Holdings

Ltd has a 100% shareholding in Franchise Development Management All Communications (Pvt) Ltd, Data Control and Systems (1996) (Pvt) Ltd, Econet Wireless (Pvt) Ltd and EW Capital Holdings (Pvt) Ltd which in turn has a 24.6% shareholding in Kingdom Financial Holdings Ltd thereby making it an associate company. Econet Wireless Holdings Ltd also holds an 84.3% holding in Transaction Processing Systems (Pvt) Ltd.

Econet Wireless (Pvt) Ltd is the group's cellular network operator and main subsidiary in terms of contribution to turnover and profitability. The company is the largest mobile cellular network provider in Zimbabwe with a 55% market share. Data Control and Systems (1996) (Pvt) Ltd which trades as Ecoweb, is the largest internet service provider serving both corporate and individual dial-up customers. Franchise Development Management All Communications (Pvt) Ltd which trades as YourFone is the community phone service operator and is the largest such operation in the country.

Transaction Processing Systems (Pvt) Ltd is a leading provider of financial transaction switching services, point of sale and value-added services that exploit the convergence of banking, information technology and telecommunications. Kingdom Financial Holdings, which is the group's associate company, is a diversified Zimbabwean listed financial services group. This investment allows the group to exploit synergies between the telecommunications industry and the banking services sector which include mobile banking, electronic airtime re-charging and e-banking.

## **Econet Analysis**

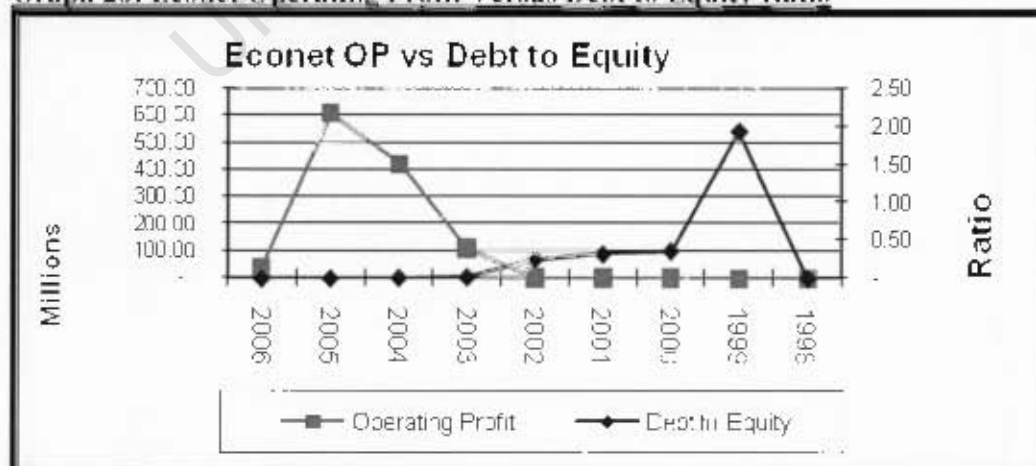
Econet is a market leader with a market share of 55% and most of its capital expenditure is foreign currency denominated. Upon listing in 1998 the firm's capital structure was skewed towards equity as it was still a new entrant in the market competing with the two unlisted main competitors Telecel and Netone who had been in operation for two years. To facilitate rapid network expansion in 1999 and with the importation of equipment from Erickson as indicated by the tangible asset to total assets ratio, the company shifted its structure towards debt. Most of the assets of the firm i.e telecoms equipment are tangible and despite the inflationary environment, the trade off capital structure theory proved true with the increased debt related to more capital equipment and company growth. This enabled it to leverage off its increased size and growing earnings.

Despite the increased market share over the years and growth in the firm, the gearing was reduced to zero in 2006 due to the unavailability of debt and the foreign exchange shortage in the economy. Most of the expansion has been funded through retained earnings. The enhanced profitability over the years fuelled by increased subscriber numbers did not trigger a need for increased debt for further expansion in conformity with pecking order theory which implies that debt is the least preferred financing option, especially when EBIT is increasing. The trend where the increased profitability did not translate into increased debt however, defies the trade off theory which predicts increased debt with increased profitability. The opposite was true and this proves that the trade off theory in relation to profitability in a hyperinflationary environment does not hold true. Econet

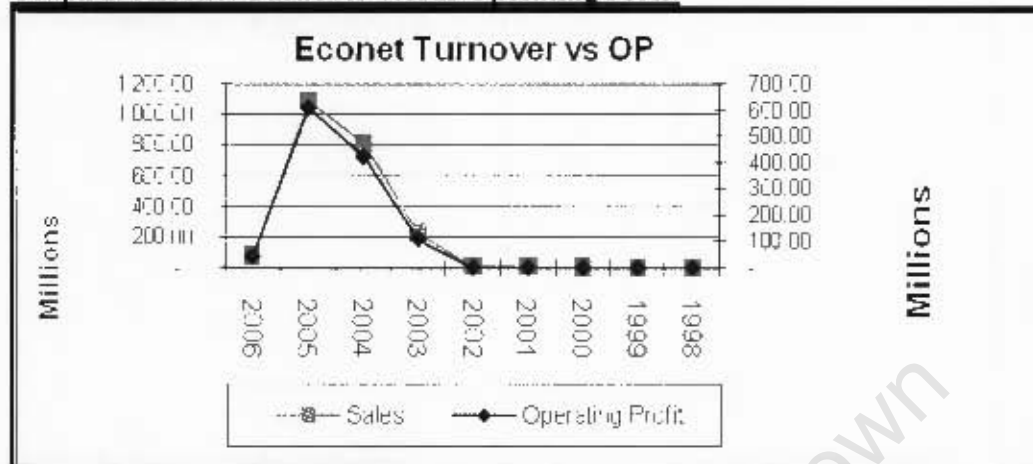
being a capital intensive organisation, adopted a strategy to be debt free (Annual report 2006) as a result of the anticipated volatility of earnings due to inflationary pressures as depicted in Graph 28. Pricing structures for their tariffs were affected by exchange rate movements and according to the firm's annual report the tariffs were still low in USD terms in comparison to the region. The firm as a result, showed signs of conformity with the pecking order theory where debt is the least preferred option when EBIT could be negative.

In conclusion, in a hyperinflationary economy especially for telecommunications companies, as a last resort firms opt for debt and this was also confirmed in the company's annual report for 2006. Econet adopted a zero debt policy and there is no defined pattern of capital structure as a result of the economic volatility. The nature of the business and anticipated margins were also a factor in determining the capital structure. A comparison with companies in the same sector was not possible as a result of the unavailability of information as the competitors are not listed.

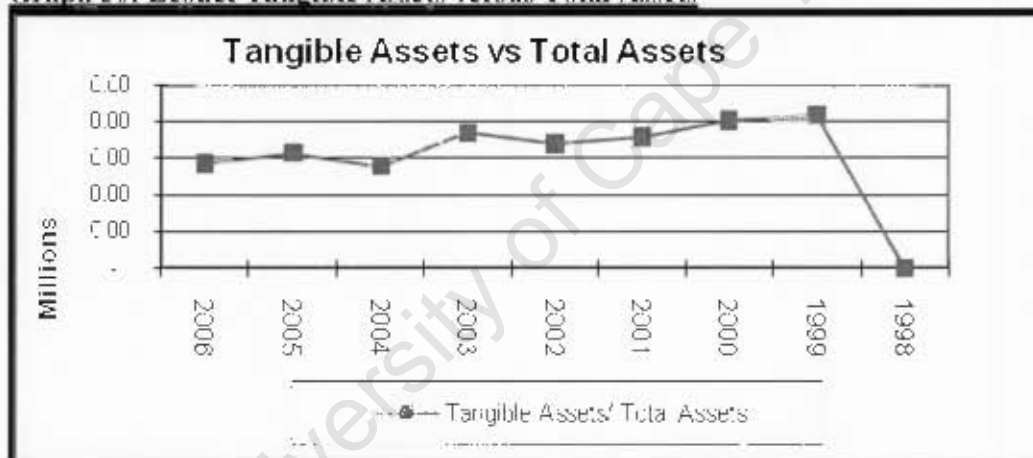
**Graph 28: Econet Operating Profit Versus Debt to Equity Ratio**



Graph 29: Econet Turnover versus Operating Profit



Graph 30: Econet Tangible Assets versus Total Assets



## 6.7 FOOD RETAIL SECTOR

### 6.7.1 OK Zimbabwe Limited

#### Background

OK is a major supermarket chain that was founded in 1940 and listed on the Zimbabwe Stock Exchange in 2001 after a demerger from Delta. Its business covers three major categories mainly groceries, basic clothing and house ware products. The company trades



under three brand names of OK stores, Bon Marche' stores and OK Express. The operations are through a branch network of 39 OK stores, 5 Bon Marche stores and 7 OK Express stores. The main competitors are Spar, TM supermarkets part of the listed Meikles Africa Group.

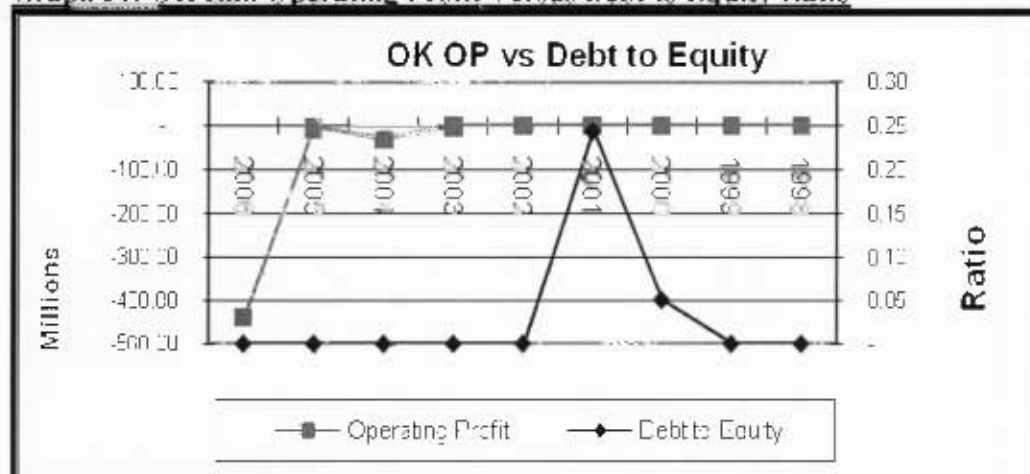
## **OK Analysis**

The retail industry in Zimbabwe has been affected by the diminishing disposable incomes as a result of inflationary pressures. This has mainly impacted the market for luxury consumer goods with the shift towards basic commodities, which is the target market for OK Zimbabwe. OK operates a cash business that requires very low levels of gearing for short term working capital requirements. The nature of its business is such that capital raising initiatives are meant to fund shop roll outs and branch expansions and renovations. The total debt to equity ratio showed signs of volatility but the interest paid has been consistent over the years reflecting very low levels of finance costs. The company did not have any debt in 1998 and there was a spike in 1999 to 2001, where the debt to equity ratio rose significantly. This was meant to fund an expansion programme before declining to around zero in 2002. The reduction was prompted by the increasing finance costs in relation to the potential decline in earnings which materialised as evidenced by an operating losses from 2003 to 2006, offset by finance income to give net profit. This is evidence that the company in that year did not make its profits from core activities. The business is very susceptible to declining disposable incomes and potential price controls that have characterised the Zimbabwean environment, which have negative effect on profitability. The effect has been very low debt levels to avoid the potential financial distress. This has resulted in retained earnings being the preferred form of

funding capital projects. The tangibility of the firms total assets did not improve the debt level as OK is a service firm whose main assets are leased shops and the equipment cannot be unwound easily. This explains the very low debt levels in favour of retained earnings and equity. The access to debt for OK will have been at a significant premium as compared to a manufacturing firm who assets can be collateralised to facilitate higher debt levels. This supports the skew towards retained earnings and the very low gearing levels. The tax benefit from carrying debt did not have an influence on the leverage decision as OK adopted a very minimalistic approach to debt and only borrowed when it was necessary.

The volatility of current and potential earnings supports the notion that, in a hyperinflationary environment size influences increased debt. OK is also a cash business whose working capital requirements are catered for by the recurrent cashflows. A comparison with other firms was not possible as they are not listed and do not provide financial information to the public.

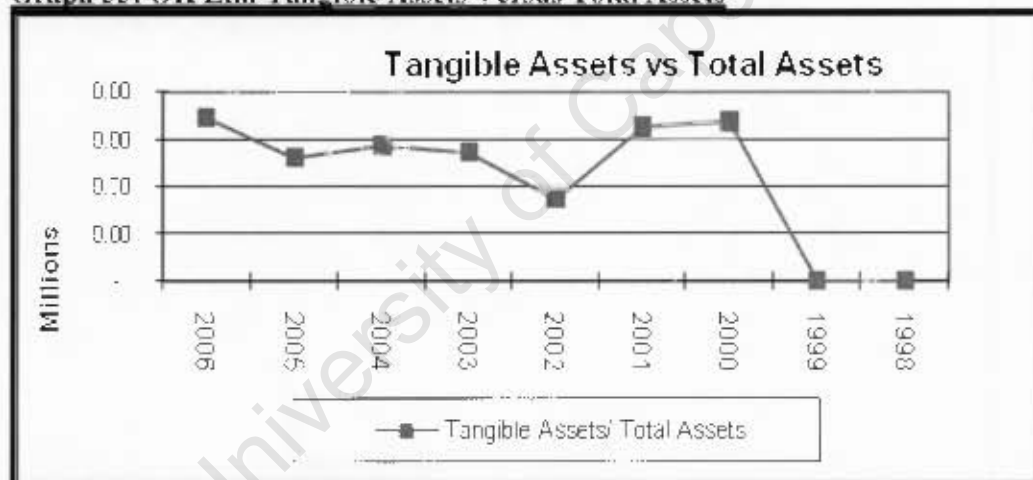
**Graph 31: OK Zim Operating Profit Versus Debt to Equity Ratio**



Graph 32: OK Zim Turnover Versus Operating profit



Graph 33: OK Zim Tangible Assets Versus Total Assets



## 6.8 Summary-Overall Analysis

The telecommunications and foodstuff retail sector, only had one company that was surveyed, therefore the company analysis above sufficed as the sectoral analysis. A comparison with companies in the same sector was not possible as a result of the unavailability of information as the competitors are not listed. In conclusion, it was noted

for both industries that capital structures changed as the economy deteriorated in support of the capital structure theory assumptions.

Capital structures have changed from 1998 to 2006 as there were both internal and external influences, mainly higher interest rates. Companies have all moved from the expensive debt financing to non-costly ways of financing their operations. Listed companies in Zimbabwe financed their growth by debt during the 1998 to 2000 and changed to retained earnings as the cost of servicing debt increased from 2000 to 2006. Though equity is the preferred source of funding compared to debt, because there are no servicing charges such as interest, there is a lag in time during the equity capital raising and under hyper inflation the capital raised will have been greatly reduced in real terms due to high inflation. Given the background on equity finance, most companies were involved in very little corporate action that involved equity financing but used internal ways of financing growth and their balance sheets mainly retained earnings.

## **CHAPTER 7: CONCLUSION**

The quantitative and qualitative techniques that were used in the study to assess the determinants of capital structure, which are size, tangibility, profitability and non-tax debt shield of the selected companies and the sectors, successfully demonstrated that capital structure theories are by and large applicable in an economy operating under hyper inflation such as Zimbabwe and have a bearing on how companies finance their balance sheets.

### **7.1 Comparison with Other Research**

A lot of work has been undertaken on the topic of capital structures dating back to Miller and Modigliani (1958) but there has been very little research that has been directed on corporates that are operating in extreme hyper inflation such as that being incurred in Zimbabwe. Whittington et al. found that hyper inflation distorts financial ratios. There is evidence that hyper inflation distorted financial ratios in Zimbabwe as the same trends have been noticed in the quantitative graphs that were constructed and reviewed, regardless of the different nature and industry of business.

### **7.2 Major insights emerging from the study**

There are major insights that have been revealed by the study, which are:

- The literature review that has been reviewed indicates that there is very little research that has been directed to hyper inflation economies and situations. Very little literature is available on capital structure in a hyperinflationary environment

hence there is lack of comparability. This study is therefore breaks new ground by revealing how capital structure decisions are arrived at in a hyper inflationary environment, and definitely for Zimbabwe.

- Capital structures change with hyper inflation and there is strong evidence that financial ratios are distorted by hyper inflation.
- Companies use the same capital structures as they all want (optimal) cheap and tax efficient ways of funding the balance sheet as the factors that cause hyper inflation have affected companies on a wide basis.
- Quality information is not readily and cheaply available in Zimbabwe, which makes it very difficult to accurately assess the choices and impact of capital structures. Zimbabwe does not enjoy access to capital markets due to the perceived high risk, and therefore is not a target for international investment. This has closed out Zimbabwean companies from participating in other types of capital raising instruments.
- Even when companies are faced with harsh operating conditions, they adapt to the changing environment by changing the source of finance and the structure of the company, as a survival tactic. This is reaffirmed by the ability to make both operating profit and net profits after adjusting for inflation.
- Capital structure theories give an indication of the action a company takes (internal action) in response to external changes allowing managers to plan ahead.
- Some of the assumptions of the capital structure theories were not assessed namely; default risk, managerial ownership, stock prices and hence value

perceived by market, free cash flow and bond contracts impacting negatively on the study.

In conclusion, the objective of the research was to test the validity and applicability of the conventional capital structure theories in the Zimbabwean environment between 1998 and 2006, where evidence was exhibited that the capital structure theories are valid though applicable in different intensities. It is important to restate the research questions and summarise how the research questions have been addressed or the points of departure, if any.

### **7.3 Answering the Research Questions**

The research questions are:

1. *How have corporate structures and financing patterns changed in Zimbabwe between 1998 and 2006?*

The graphs shown above in the analysis section indicate that companies have followed universal capital structure decisions. This has been influenced by the same factors having a generic effect on all the companies in Zimbabwe, which is in an economic crisis. It has been evidenced that all the eight companies that were assessed changed from debt financing to other forms of financing their operations, being mainly retained earnings which is a cheap form of financing relative to debt finance. There has been little equity finance raising activity due to the costs involved and the time lags, where the capital raised would be eroded by hyper inflation. This has led to the conclusion that corporate structures and financing patterns have changed in Zimbabwe. The capital structures have shifted from external financing to an internal source financing.

2. *How have listed companies in Zimbabwe financed their growth and to what extent have capital structure theories been applicable?*

Companies listed on the ZSE have traditionally financed their operations by debt, and by raising equity through rights issues and Initial Public Offerings. The sample that has been assessed in this research shows that the economic situation in Zimbabwe has significantly deteriorated with high interest rates and hyper inflation negatively affecting corporates. This has led companies to shift from the traditional capital raising methods to internal means of financing their operations. The deliberate strategy by companies to reduce debt was necessitated by the high interest rates which are a function of high government borrowing, which crowds out the private sector ultimately inhibiting private sector investment. This has caused companies in Zimbabwe to shrink and ultimately source funding from internal means. This phenomenon has been widely evident in the analysis this research has undertaken and the findings thereof, where companies have shifted from debt and equity funding to retained earnings, which is a cheap alternative, foregoing the tax benefits of debt.

Capital structures have widely been applicable to corporates listed on the ZSE, though at different intensities. The impact of the underlying assumptions of the capital theories were not all fully assessed due to the nature of the Zimbabwe capital markets, where, not all the financing instruments and structures are applicable or merely are in existence. The trade off theory has clearly been applicable as shown in the analysis of companies and industries. However, three key predictions of the trade off theory could not be assessed,



namely: The effective tax rate is positively related with the debt level, default risk is negatively correlated to firm's debt ratio, and the size of a company is positively correlated to the level of debt. The signalling theory was applicable although not clear because information asymmetry between managers and investors is difficult to assess and quantify, especially where the stock prices and managerial ownership issues were not assessed.

The pecking order theory was clearly evidenced in the analysis where companies prefer internal to external finance and issuance of safer securities to more risky ones. However, one of the key assumptions was not assessed, which is, debt issues do not cause any stock price movements because an event study was not undertaken.

3. *Are there any differences in corporate structures according to industry classification, size of firm under hyperinflation?*

The study did not identify structural differences in corporate structures according to industry classification under hyperinflation. The findings indicate that the structures are generic across industries, which is attributable to the same economic factors affecting all companies such as high interest rates, diminishing purchasing power, hyper inflation and fiscal indiscipline. A strong correlation between the choices of capital structure to the economic environment that has prevailed in Zimbabwe was evident, as companies and industries followed the same trends in the choice of capital structure even though the randomly selected companies represented large listed organisations. This supported empirical evidence Whittington et al. (1980), where they concluded that hyper inflation

distorts financial ratios, which in turn leads to the same trends applying to companies operating in a hyper inflation environment.

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**Appendix 1: Zimbabwe Consumer Price Index-All Items (Year on Year Inflation)**

	1998	1999	2000	2001	2002	2003	2004	2005	2006
	%	%	%	%	%	%	%	%	%
January	24.20	44.13	55.95	80.56	116.74	208.18	622.76	133.57	613.17
February	23.99	49.97	48.91	80.48	116.35	220.94	602.49	127.22	782.02
March	27.97	52.76	50.79	80.71	113.42	227.94	583.71	123.70	913.56
April	26.42	52.70	53.71	80.56	113.97	269.19	505.06	129.06	1042.93
May	29.31	52.96	58.68	80.75	122.60	300.10	448.74	144.37	1193.50
June	29.84	55.20	59.27	79.64	114.66	364.42	394.56	164.31	1184.66
July	29.33	63.55	53.41	78.95	123.54	399.55	362.89	254.80	993.64
August	29.32	68.82	53.52	78.18	135.05	426.58	314.55	265.14	1204.56
September	31.69	69.69	61.97	76.94	139.93	455.58	251.53	359.85	
October	34.33	70.40	60.82	75.49	144.14	525.84	209.02	410.98	
November	45.12	61.21	55.96	74.75	175.40	619.48	149.26	502.35	
December	46.66	56.90	55.22	73.73	198.89	598.73	132.75	585.84	
Annual Average*	31.52	58.19	55.68	78.40	134.56	384.71	381.44	266.77	1321.34
*Calculated by dividing the total of monthly rates by 12									

**SOURCES: Central Statistics Quarterly Bulletins 1998-2006**

## Appendix: 2 Schedule of Interest rates

Interest Rates - BA Rate	BA Yield	90-Day NCD Rate	TB Effective Yield (Rate)
31-Jan-95	32.72	35.59	40.00
28-Feb-95	32.08	35.09	40.00
31-Mar-95	33.38	36.27	41.00
30-Apr-95	33.75	36.51	40.00
31-May-95	33.84	35.97	40.00
30-Jun-95	33.92	37.02	40.00
31-Jul-95	34.75	38.07	40.00
31-Aug-95	37.23	41.02	40.00
30-Sep-95	37.21	41.07	39.50
31-Oct-95	37.84	41.78	40.50
30-Nov-95	38.21	41.78	40.50
31-Dec-95	38.25	42.23	42.00
31-Jan-96	38.71	44.87	41.25
28-Feb-96	38.75	43.84	41.50
31-Mar-96	38.75	44.07	41.50
30-Apr-96	38.85	44.73	42.00
31-May-96	40.00	44.38	42.00
30-Jun-96	41.63	45.88	45.00
31-Jul-96	44.10	48.98	46.75
31-Aug-96	46.15	52.20	48.75
30-Sep-96	52.10	58.31	58.50
31-Oct-96	55.10	59.73	67.25
30-Nov-96	60.65	79.40	70.00
31-Dec-96	65.00	77.41	72.50
31-Jan-97	65.00	77.41	72.50
30-Feb-97	64.50	69.72	68.50
31-Mar-97	63.75	75.64	70.00
30-Apr-97	67.25	80.42	89.00
31-May-97	61.50	72.42	56.50
30-Jun-97	60.00	73.15	58.50
31-Jul-97	60.50	75.10	70.00
31-Aug-97	64.50	81.26	81.00
30-Sep-97	60.50	80.11	85.50
31-Oct-97	50.75	89.00	80.25
30-Nov-97	55.75	81.82	81.50
31-Dec-97	50.00	80.27	88.50
31-Jan-98	55.88	88.21	87.00
28-Feb-98	51.79	72.98	83.50
31-Mar-98	49.25	70.21	80.50
30-Apr-98	43.88	65.43	73.50
31-May-98	44.25	64.77	74.25
30-Jun-98	43.50	64.97	75.50
31-Jul-98	47.00	70.78	81.00
31-Aug-98	47.25	72.43	87.50
30-Sep-98	48.25	74.66	90.50
31-Oct-98	47.25	74.58	91.50
30-Nov-98	48.25	74.58	95.00
31-Dec-98	47.25	74.58	95.00
31-Jan-99	45.50	77.27	97.50
29-Feb-99	45.50	77.27	97.50
31-Mar-99	45.50	77.27	97.50
30-Apr-99	47.25	80.65	92.50
31-May-99	47.75	72.84	92.50
30-Jun-99	48.50	74.77	97.50
31-Jul-99	48.50	82.51	92.50
31-Aug-99	48.50	86.80	95.00
30-Sep-99	48.50	86.87	127.00
31-Oct-99	48.50	86.85	135.00
30-Nov-99	48.50	70.42	131.00
31-Dec-99	48.50	82.50	130.00
31-Jan-00	48.50	82.50	130.00
29-Feb-00	48.50	82.50	130.00
31-Mar-00	48.50	82.50	130.00
30-Apr-00	48.50	82.50	130.00
31-May-00	48.50	82.50	130.00
30-Jun-00	48.50	82.50	130.00
31-Jul-00	48.50	82.50	130.00
31-Aug-00	48.50	82.50	130.00
30-Sep-00	48.50	82.50	130.00
31-Oct-00	48.50	82.50	130.00
30-Nov-00	48.50	82.50	130.00
31-Dec-00	48.50	82.50	130.00
31-Jan-01	48.50	82.50	130.00
29-Feb-01	48.50	82.50	130.00
31-Mar-01	48.50	82.50	130.00
30-Apr-01	48.50	82.50	130.00
31-May-01	48.50	82.50	130.00
30-Jun-01	48.50	82.50	130.00
31-Jul-01	48.50	82.50	130.00
31-Aug-01	48.50	82.50	130.00
30-Sep-01	48.50	82.50	130.00
31-Oct-01	48.50	82.50	130.00
30-Nov-01	48.50	82.50	130.00
31-Dec-01	48.50	82.50	130.00
31-Jan-02	48.50	82.50	130.00
29-Feb-02	48.50	82.50	130.00
31-Mar-02	48.50	82.50	130.00
30-Apr-02	48.50	82.50	130.00
31-May-02	48.50	82.50	130.00
30-Jun-02	48.50	82.50	130.00
31-Jul-02	48.50	82.50	130.00
31-Aug-02	48.50	82.50	130.00
30-Sep-02	48.50	82.50	130.00
31-Oct-02	48.50	82.50	130.00
30-Nov-02	48.50	82.50	130.00
31-Dec-02	48.50	82.50	130.00
31-Jan-03	48.50	82.50	130.00
29-Feb-03	48.50	82.50	130.00
31-Mar-03	48.50	82.50	130.00
30-Apr-03	48.50	82.50	130.00
31-May-03	48.50	82.50	130.00
30-Jun-03	48.50	82.50	130.00
31-Jul-03	48.50	82.50	130.00
31-Aug-03	48.50	82.50	130.00
30-Sep-03	48.50	82.50	130.00
31-Oct-03	48.50	82.50	130.00
30-Nov-03	48.50	82.50	130.00
31-Dec-03	48.50	82.50	130.00
31-Jan-04	48.50	82.50	130.00

SOURCES: Reserve Bank Quarterly Reports 1998 to 2006

### Appendix 3-Financial Statements of Selected Listed Companies

ASTRA - INFLATION ADJUSTED DATA									
	2006	2005	2004	2003	2002	2001	2000	1999	1998
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Turnover	9,954	8,527	10,461	14,022	12,498	1,063	2,800	1,077	549
	254.00	632.00	118.00	343.00	361.00	361.00	422.00	554.00	148.00
Operating profit(loss)	553	1,265	-190,970.00	1,617	2,587	106	323	156	73
	402.00	843.00	-190,970.00	833.00	207.00	476.00	677.00	123.00	311.00
Monetary adjustments	-919	-1,222	-	-1,485	-	-	-	-	-
	846.00	826.00	-690,390.00	162.00	-350,493.00	-399.00	-40,503.00	-	-9
Finance income(costs)	213	-	-	-	-	-	-	-	-
	34.50	123,834.00	-87,266.00	77,314.00	12,849.00	-732.00	88,836.00	-41,669.00	389.00
Profit after finance income	-173	-	-	2,350	2,249	514	372	114	65
Income from other investments	109.10	396,851.00	-909,026.00	443.00	563.00	787.00	308.00	454.00	622.00
Share of operating income of associated companies	-	-	-	-	-	-	47,399.00	-	-
Profit(loss) before taxation	223	-	-	2,350	2,249	314	319	114	65
	699.00	396,851.00	-909,026.00	443.00	563.00	787.00	308.00	454.00	622.00
Taxation	-225	-126	-	-	-	-141	-243	-	-26
	195.00	162.00	-478,271.00	-463,679.00	-863,155.00	-960.00	-204.00	-17,244.00	211.00
Profit(loss) after taxation	-48	-	-	1,584	1,366	172	176	-	39
	254.00	280,689.00	-490,274.00	804.00	428.00	887.00	737.00	73,330.00	411.00
Minority interest	-12,296.00	188.00	-113,847.00	-48,762.00	-93,569.00	-51,714.00	-43,311.00	-42,422.00	-193.00
Profit(loss) attributable to members of the company	-48	-	-	1,516	1,272	150	132	-	30
	590.00	280,877.00	-494,122.00	842.00	459.00	113.00	484.00	60,908.00	218.00
Dividend	134.00	0.00	-129,830.00	-129,283.00	56,952.00	-31,341.00	-38,703.00	8,613.00	1,267.00
	-562	-	-	1,186	-	-	-	-	33
Retained profit	94.00	154,661.00	-103,152.00	25.00	60,952.00	-88,572.00	-54,727.00	69,521.00	1,034.00
<b>BALANCE SHEET</b>									
<b>Non-current assets</b>									
Properties, plant and equipment	3,232	3,142	1,473	1,590	1,416	477	361	200	197
	384.00	453.00	682.00	448.00	337.00	156.00	630.00	130.00	671.00
Goodwill	26,290.00	26,290.00	-	143,150.00	163,353.00	-	-	-	-
Investments	17,348.00	13,348.00	8,528.00	8,521.00	2,839.00	4,195.00	4,195.00	4,835.00	4,614.00
	1,202	1,182	1,481	1,353	1,277	481	565	204	291
	402.00	491.00	640.00	869.00	781.00	231.00	825.00	965.00	683.00
<b>Current assets</b>									
Mark and cash	353	812,236.00	636,832.00	708,990.00	105,775.00	53,834.00	27,688.00	69,451.00	120.00
	1,599	2,149	2,379	3,399	4,478	1,379	1,472	119	31
Other current assets	496.00	73,800.00	754.00	443.00	757.00	261.00	315.00	980.00	760.00
	1,851	2,950	2,438	6,138	5,684	1,433	1,675	183	38
	545.00	308.00	383.00	345.00	532.00	632.00	693.00	331.00	480.00
Total assets	5,143	6,334	4,518	7,472	6,562	1,814	2,176	808	280
	867.00	665.00	723.00	212.00	215.00	260.00	828.00	716.00	745.00
<b>Equity of Company</b>									
Ordinary shares	3,734	3,734	1,734	3,734	3,734	1,398	1,388	-	-
	834.00	839.00	799.00	799.00	799.00	786.00	234.00	-	-
Reserves	579	-167	-1,000	-	-175	-217	-	-	-
	281.00	293.00	678.00	149,714.00	-390,944.00	128.00	209.00	-	-
	3,154	3,567	2,434	3,851	3,323	927	1,169	283	232
	158.00	345.00	721.00	5,130.00	855.00	452.00	693.00	819.00	454.00
Minority interest	-12,965.00	74,199.00	107,100.00	108,531.00	152,881.00	687.00	540.00	58,132.00	170.00
<b>Non-current liabilities</b>									
Borrowings	-	-	-	1,566.00	1,682.00	11,145.00	20,590.00	-	-
	990	990	990	798.00	990	990	990	990	990
Deferred liabilities	798.00	990,649.00	403,256.00	322,835.00	445,138.00	94,686.00	473.00	-	-
	990	990	990	990	990	990	990	990	990
	798.00	990,649.00	403,256.00	322,835.00	445,138.00	94,686.00	473.00	-	-
<b>Current liabilities</b>									
Borrowings	-	-	203,623.00	364,615.00	36,307.00	254.00	76,493.00	66,371.00	541.00
	945	1,343	1,369	2,382	2,547	415	649	-	-
Other current liabilities	945.00	272.00	434.00	540.00	450.00	622.00	667.00	-	-
	945	1,545	1,573	2,747	2,403	746	846	-	-
	345.00	272.00	196.00	273.00	257.00	806.00	769.00	6,735.00	943.00
Total equity and liabilities	5,143	6,334	4,518	7,472	6,562	1,814	2,176	808	280
	867.00	665.00	723.00	212.00	215.00	260.00	828.00	716.00	745.00
<b>INVESTMENT</b>									
Capital expenditure	168	158,591.00	185,888.00	209,354.00	41,537.00	568.00	-	-	-
	210	234	3,071	3,623	1,298	555	-	-	-
Current assets (decrease)/increase	933.00	638.00	759.00	810.00	633.00	357.00	-	-	-

**DELTA - INFLATION ADJUSTED DATA**

	2006 Z\$m	2005 Z\$m	2004 Z\$m	2003 Z\$m	2002 Z\$m	2001 Z\$m	2000 Z\$m	1999 Z\$m	1998 Z\$m
Turnover	34 485 175.00	34 591 031.00	2 542 331.00	1 373 811.00	43 971 000.00	24 985 000.00	18 101 000.00	12 000 521.00	8 389 086.00
Net operating costs	-29 726 287.00	-3 067 977.00	-2 410 321.00	-995 859.00	-	-	-	-	-
Operating income	4 758 888.00	391 060.00	132 010.00	175 952.00	9 642 000.00	24 985 000.00	18 101 000.00	12 000 521.00	8 389 086.00
Non-recurring items	-	-	-2 105.00	-5 282.00	-	-	-	-	-
Net financing income	486 855.00	45 234.00	123 483.00	-4 321.00	-793 000.00	-1 201 000.00	-914 000.00	-362 281.00	-178 828.00
Monetary loss	-4 567 446.00	-73 086.00	30 742.00	26 168.00	-	-	-	-	-
Equity accounted losses/gainings	-266 972.00	26 804.00	7 570.00	8 751.00	-	-	-	-	-
Taxation	409 326.00	190 072.00	24 734.00	2 4 568.00	8 449 000.00	28 694 000.00	17 767 000.00	11 103 240.00	8 213 238.00
	7 167.00	-8 370.00	36 565.00	-32 497.00	2 151 000.00	515 000.00	-12 714 000.00	-135 550.00	-213 739.00
Income after taxation	416 515.00	747 762.00	225 699.00	172 023.00	7 698 000.00	21 179 000.00	16 748 000.00	10 932 650.00	7 994 299.00
Attributable to:									
Equity holders of the parent company	263 693.00	-	-	-	-	-	-	-	-
Minority interest	152 820.00	-8 396.00	-29 345.00	-7 023.00	-564 000.00	-23 000.00	-216 000.00	-294 396.00	-72 274.00
Earnings attributable to shareholders	833 026.00	279 266.00	96 336.00	165 048.00	6 144 000.00	21 456 000.00	16 524 000.00	10 238 254.00	7 922 025.00
Dividends	-	-368 730.00	-72 564.00	-53 484.00	-	-	-	-	-
Retained earnings for the year	833 026.00	279 266.00	96 336.00	165 048.00	6 144 000.00	21 456 000.00	16 524 000.00	10 238 254.00	7 922 025.00
<b>BALANCE SHEET:</b>									
<b>ASSETS</b>									
<b>Non-current assets</b>									
Property, plant and equipment	16 932 079.00	1 120 704.00	1 315 479.00	624 950.00	3 638 000.00	5 432 000.00	5 128 000.00	4 559 777.00	2 586 278.00
Biological assets	445 259.00	-	-	-	-	-	-	-	-
Investments in associates	333 713.00	59 114.00	41 114.00	17 053.00	450 000.00	-	-	-	-
Investments and other long term assets	234 214.00	11 639.00	12 135.00	13 825.00	608 000.00	805 000.00	432 000.00	222 342.00	177 027.00
	18 035 247.00	1 191 457.00	1 368 728.00	655 828.00	4 796 000.00	6 237 000.00	5 560 000.00	4 782 119.00	2 863 305.00
<b>Current assets</b>									
Intangibles	6 040 832.00	6 081 594.00	766 712.00	299 162.00	5 751 000.00	3 574 000.00	2 380 000.00	1 728 098.00	958 635.00
Debtors	2 640 194.00	21 453.00	124 245.00	54 686.00	3 398 000.00	3 505 000.00	2 442 000.00	2 924 172.00	1 582 955.00
Net receivables	16 198.00	3 807.00	1 119.00	684.00	356 000.00	1 882 000.00	1 496 000.00	1 718 175.00	607 948.00
Cash and cash equivalents	305 828.00	283 262.00	29 886.00	41 333.00	25 14 000.00	250 000.00	264 000.00	70 486.00	56 827.00
	9 012 352.00	6 366 616.00	921 962.00	405 085.00	12 439 000.00	8 911 000.00	6 568 000.00	5 546 932.00	3 206 365.00
Total assets	27 047 599.00	7 558 073.00	2 290 690.00	1 060 913.00	17 235 000.00	15 148 000.00	12 128 000.00	10 329 151.00	6 069 670.00
<b>EQUITY AND LIABILITIES</b>									
<b>Capital and Reserves</b>									
Share capital	3 163 738.00	512 146.00	312 135.00	159 532.00	-	-	-	-	-
Share premium	7 292 534.00	617 654.00	567 266.00	249 664.00	-	-	-	-	-
Share options reserve	253 944.00	-	-	-	-	-	-	-	-
Non-distributable reserves	-	-	-	-	-	-	-	-	-
Distributable reserves	4 397 137.00	499 290.00	393 417.00	243 668.00	-	-	-	-	-
Proposed dividend	324 639.00	119 951.00	37 202.00	30 258.00	-	-	-	-	-
	15 131 990.00	1 349 041.00	1 310 120.00	633 022.00	0.00	7 827 000.00	5 901 000.00	5 252 914.00	3 414 060.00
Minority interest	3 528 828.00	62 216.00	56 161.00	16 950.00	306 000.00	1 150 000.00	1 106 000.00	907 147.00	404 946.00
Total equity	18 660 818.00	1 411 257.00	1 366 281.00	650 072.00	8 190 000.00	8 957 000.00	7 007 000.00	6 260 061.00	3 819 006.00
<b>Non-current liabilities</b>									
Long-term borrowings	20 094.00	94.00	710.00	643.00	94 000.00	25 000.00	491 000.00	53 828.00	27 126.00
Tax liabilities and deferred taxation	5 510 980.00	394 681.00	488 678.00	187 099.00	2 458 000.00	195 000.00	325 000.00	309 974.00	129 409.00
	5 531 074.00	394 775.00	489 388.00	187 742.00	2 552 000.00	220 000.00	816 000.00	363 802.00	156 535.00
<b>Current liabilities</b>									
Short-term borrowings	150 481.00	1 942.00	21 437.00	29 957.00	356 000.00	1 882 000.00	1 496 000.00	1 118 700.00	607 948.00
Creditors	2 453 614.00	338 171.00	226 423.00	138 405.00	5 569 000.00	3 269 000.00	2 564 000.00	2 077 086.00	1 355 742.00
Taxation	871 312.00	201 982.00	195 701.00	58 801.00	1 458 000.00	495 000.00	325 000.00	699 974.00	129 409.00
	3 475 407.00	512 095.00	443 621.00	227 159.00	7 483 000.00	5 646 000.00	4 325 000.00	3 905 238.00	2 094 699.00
Total equity and liabilities	27 047 599.00	7 558 073.00	2 290 690.00	1 060 913.00	17 235 000.00	15 148 000.00	12 128 000.00	10 329 151.00	6 069 670.00

OK - INFLATION ADJUSTED DATA

	2006	2005	2004	2003	2002	2001	2000
	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000
<b>Turnover</b>	18 102 475 771.00	18 210 796.00	577 547 147.00	79 061 022.00	22 546 838.00	10 370 000.00	11 106 000.00
<b>Operating Result</b>							
Operating Result	-430 372 978.00	-4 988 165.00	-36 597 707.00	-676 243.00	352 895.00	335 000.00	405 000.00
Financing income/(costs)	698 974 333.00	55 751 236.00	7 448 938.00	304 137.00	-29 357.00	-43 000.00	8 000.00
Fair value adjustments						96 000.00	
Monetary gain	559 911 422.00	51 855 990.00	50 005 060.00	2 398 321.00	231 129.00	290 000.00	134 000.00
<b>Income before taxation</b>	819 512 777.00	83 622 061.00	27 256 291.00	2 026 209.00	353 567.00	580 000.00	548 000.00
Taxation (credit)/charge	-139 639 651.00	5 009 571.00	-5 782 113.00	1 291 174.00	315 627.00	10 000.00	-64 000.00
<b>Income after taxation attributable to Shareholders</b>	679 873 126.00	77 631 632.00	21 474 178.00	3 317 383.00	880 204.00	590 000.00	484 000.00
Origin dividend pool		15 309 114.00	4 990 004.00	484 055.00			
Proposed final dividend		30 688 368.00	11 355 482.00	1 452 000.00	550 000.00		
<b>Retained income/(loss) for the year</b>	679 873 126.00	72 252 876.00	5 128 696.00	1 371 350.00	329 204.00	590 000.00	484 000.00
<b>BALANCE SHEET:</b>							
<b>Shareholders equity</b>							
Shareholders equity	1 580 174 292.00	132 655 874.00	51 069 071.00	7 606 515.00	2 975 850.00	1 740 000.00	926 000.00
Deferred taxation	391 878 527.00	26 692 095.00	11 066 933.00	1 359 760.00	162 555.00	223 000.00	295 000.00
Interest bearing debt					602.00	277 000.00	47 000.00
<b>Total capital employed</b>	1 972 053 120.00	159 347 969.00	62 136 004.00	8 966 275.00	3 138 957.00	1 960 000.00	1 208 000.00
<b>Non current assets</b>							
Properties, plant and equipment and intangibles	1 084 304 590.00	87 216 049.00	33 690 119.00	4 236 620.00	877 549.00	910 000.00	866 000.00
Investments, goodwill and other non current assets	66 208 137.00	5 569 032.00	2 685 058.00	262 460.00	465 582.00	295 000.00	67 000.00
	1 150 512 727.00	92 785 081.00	36 375 177.00	4 499 080.00	1 343 132.00	1 205 000.00	933 000.00
<b>Current assets</b>							
Stocks	1 399 452 571.00	96 379 912.00	44 029 689.00	7 413 471.00	1 658 601.00	210 000.00	619 000.00
Debtors	122 695 741.00	17 318 575.00	2 908 253.00	2 617 137.00	1 238 370.00	777 000.00	949 000.00
Short term bank						2 000.00	
Bank balances and cash	452 304 304.00	726 087 132.00	59 628 934.00	798 129.00	814 081.00	107 000.00	64 000.00
	1 974 452 616.00	1 239 785 619.00	86 616 876.00	10 828 737.00	3 711 052.00	1 996 000.00	1 632 000.00
<b>Total assets</b>	3 946 505 736.00	2 839 133 588.00	148 752 880.00	19 795 012.00	6 850 009.00	3 956 000.00	2 840 000.00
<b>Interest free liabilities</b>							
<b>Trade and other</b>							
Creditors	1 106 395 989.00	152 682 972.00	53 400 873.00	5 876 059.00	1 950 597.00	1 041 000.00	1 235 000.00
Taxation	70 556 435.00	26 539 755.00	8 855 179.00	880 593.00	144 770.00	123 000.00	116 000.00
	1 176 952 424.00	179 222 727.00	62 256 052.00	6 756 652.00	2 095 367.00	1 164 000.00	1 351 000.00
<b>Total employment of capital</b>	1 176 952 424.00	179 222 727.00	62 256 052.00	6 756 652.00	2 095 367.00	1 164 000.00	1 351 000.00

ZIMSUN- INFLATION ADJUSTED DATA

	2006	2005	2004	2003	2002	2001	2000	1999	1998
	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000
Turnover	11 491	234 382	80 915	159 871	2 165	3 220	1 728	1 267	857
	023 00	408 00	135 00	532 00	765 00	742 00	388 00	876 00	304 00
Materials and consumables used	-3 774	-42 293							
Depreciation, amortisation and impairment charges	230 00	606 00							
	-5 545	-26 517							
Staff Costs	168 00	665 00							
	-3 334	-73 361							
Other Operating Expenses	235 00	979 00							
	-660	-28 646							
	280 00	377 00							
Net operating costs			-85 341	-123 423	-1 602	-4 401	1 397	997	558
			80 00	058 00	250 00	703 00	178 00	535 00	474 00
Operating (loss)/profit	176	-4 441	-4 620	36 448	-1 436	-1 270	326	271	17
	490 00	219 00	050 00	491 00	481 00	961 00	213 00	379 00	830 00
Share of profits of associates	18 997 00	803 184 00	626 692 00	933 00	-	-			
					-21	-74			
Equity accounted losses					947 00	992 00			
					-922	-3 274			
Net financing expenses	-2 736 00	792 00	885 00	474 00	630 00	631 00	324 00	118 00	778 00
	-3 162								
Monetary loss/gain	330 00								
	-2 569	-12 577	-5 802	42 234	-2 381	-2 639	162	431	158
Net (loss)/profit before non-recurring items	619 00	817 00	849 00	879 00	658 00	984 00	489 00	517 00	052 00
			-15 111		-545	-163			
Non-recurring items			166 00		937 00	121 00			
			-26 780	-7 372	-148	-139			
Fair value adjustments			321 00	619 00	716 00	938 00			
Recovery of prior years' impairment of fixed assets					654				
					001 00				
Monetary loss/gain		-3 206	-1 467	-85 092	1 783	1 270			
		193 00	296 00	625 00	528 00	12 00			
Profit/(loss) from ordinary activities before taxation	-2 989	-15 915	-89 492	-40 430	233	-1 656	162	401	168
	349 00	917 00	132 00	365 00	292 00	931 00	490 00	517 00	052 00
	-1 036	4 584	7 431	-13 868	-32	1 066			
Taxation	243 00	574 00	882 00	741 00	286 00	050 00			
	-3 305	-11 333	-82 040	-52 320	221	-589	187	401	168
(Losses)/profits for the year after taxation	85 100	263 66	050 05	129 00	060 00	981 00	677 00	517 00	052 00
(Losses)/profits for the year attributable to:									
The group			-42 317	-53 920	243	514			
			342 00	037 00	053 00	989 00			
Associate companies				1 600	-21	-74			
			626 692 00	911 00	947 00	992 00			
			-82 090	-52 319	221	-589			
			050 05	126 00	1 0630	981 00	677 00	517 00	052 00

BALANCE SHEET

ASSETS

Non-current assets

Properties, plant, equipment, and vehicles	28 939	81 094	88 197	55 204	9 234	10 941	2 370	2 048	1 825
	805 00	561 00	337 00	391 00	304 00	620 00	995 00	581 00	437 00
	213						1 49	60	61
Investments and loans	647 00						331 00	249 00	211 00
	13 138								
Investments in associates	954 00								
	367								
Intangible assets	925 00								
Biological assets	31 710 00								
Deferred taxation asset	21 351 00						649 00	610 00	649 00
		-6 228	1 593	6 687	212	338	14		
Financial instruments and loans	140 00		390 00	705 00	537 00	930 00	650 00		
			4 587						
Limited investments		253 960 00							
		9 601	1 956						
Deferred expenditure		192 00	254 00						
	42 653	20 280	56 339	62 402	3 440	11 280	2 935	2 100	1 087
	690 00	219 00	566 00	686 00	862 00	550 00	628 00	390 00	197 00

Current assets

Inventory	532	7 782	8 400	2 822	157	185	83	45	34
	633 00	025 00	477 00	556 00	110 00	757 00	762 00	780 00	813 00

Trade and other receivables	1,410	32,535	12,011	7,930	395	534	249	226	144
	960.00	946.00	924.00	718.00	123.00	867.00	568.00	708.00	802.00
Cash and cash equivalents	675								
	605.00			156,918					
Available-for-sale assets				588.00					
Elephant Hills Inter-continental fire insurance proceeds pending					497				
					257.00				
				4,395	172				
				752.00	610.00				
Net interest bearing loans									
Shareholders' equity			9,134.00	18,249.00	2,756.00	8,370.00			
	2,629	40,517	15,521	274,085	1,224	728	333	272	178
	298.16	971.00	535.00	863.00	856.00	591.00	330.00	488.00	517.00
<b>Total assets</b>	<b>43,272</b>	<b>51,538</b>	<b>71,857</b>	<b>235,977</b>	<b>7,171</b>	<b>7,002</b>	<b>2,868</b>	<b>2,881</b>	<b>1,266</b>
	<b>380.00</b>	<b>1,013.00</b>	<b>1,013.00</b>	<b>959.00</b>	<b>717.16</b>	<b>541.00</b>	<b>958.00</b>	<b>887.00</b>	<b>1,200</b>
<b>Shareholders' equity</b>									
Share capital	638.00	579,969.00	579,969.00	579,797.00	524	523			
					081.00	892.00			
State premium	74,546.00	303,394.00	303,094.00	302,923.00	228	228			
	27,477	798,626	356,517	356,517	588.00	348.00			
Inflation adjustment to share capital and share premium	276.00	726.00	251.00	207.00	25,204	25,104			
					050.00	010.00			
Reserve	20,957.00								
		10,017							
Fair value reserve		400.00							
	11,127	3,753	3,127	2,553					
Foreign currency translation reserve	709.00	780.00	886.00	703.00					
	-28,888	-225,880	-319,420	-213,377	-9,780	-9,952			
(Accumulated losses) (Distribution reserves)	564.00	706.00	928.00	479.00	742.00	648.00			
	32,012	87,402	41,107	248,468	8,325	5,904	1,770	1,495	953
<b>Total shareholders' equity</b>	<b>74,000</b>	<b>263,341</b>	<b>272,031</b>	<b>647,000</b>	<b>737.00</b>	<b>1,110</b>	<b>2,868</b>	<b>2,881</b>	<b>268.00</b>
<b>LIABILITIES</b>									
<b>Non-current liabilities</b>									
Borrowings	73,853.00						0.00		
		3,202					741	167	98
Long term loan		519.00					388.00	648.00	421.00
Deferred taxation	10,914	23,564	12,476	66,664	2,424	2,392			
	842.00	405.00	520.00	579.00	671.00	485.00	649.00	649.00	649.00
Deferred liability									
						1,164.00			
Net interest bearing debt			309,600.00			1,960			
	11,050	26,706	12,846	66,664	2,424	5,454	742	1,495	953
	685.00	924.00	176.00	579.00	671.00	426.00	649.00	649.00	649.00
<b>Current liabilities</b>									
Borrowings	163						0.00		
	504.00								
Elephant Hills Inter-continental provision for related							0.00		
Fellow subsidiaries									
Preference dividend payable					1,571		96	146	65
					914.00		399.00	266.00	481.00
Net interest bearing debt						35			
	2,085					824.00	0.00		
Trade and other payables	133.00					165	260	361	142
		3,795				738.00	044.00	587.00	462.00
		758.00							
		41,705	17,963	26,444	549	449		377	104
		772.00	669.00	733.00	305.00	365.00		819.00	152.00
<b>Total liabilities</b>	<b>2,749</b>	<b>45,501</b>	<b>37,903</b>	<b>26,444</b>	<b>2,121</b>	<b>650</b>	<b>356</b>	<b>985</b>	<b>312</b>
	<b>517.00</b>	<b>530.00</b>	<b>669.00</b>	<b>733.00</b>	<b>305.00</b>	<b>927.00</b>	<b>423.00</b>	<b>721.00</b>	<b>695.00</b>
<b>Total equity and liabilities</b>	<b>76,749</b>	<b>77,848</b>	<b>10,960</b>	<b>712,944</b>	<b>4,257</b>	<b>5,135</b>	<b>3,224</b>	<b>3,766</b>	<b>1,578</b>
	<b>672.00</b>	<b>454.00</b>	<b>419.00</b>	<b>112.00</b>	<b>952.00</b>	<b>555.00</b>	<b>480.00</b>	<b>12,000</b>	<b>755.00</b>
	<b>45,272</b>	<b>51,538</b>	<b>71,857</b>	<b>235,977</b>	<b>7,171</b>	<b>7,002</b>	<b>2,868</b>	<b>2,881</b>	<b>1,266</b>
	<b>380.00</b>	<b>1,013.00</b>	<b>1,013.00</b>	<b>959.00</b>	<b>717.16</b>	<b>541.00</b>	<b>958.00</b>	<b>887.00</b>	<b>1,200</b>



TA HOLDINGS - INFLATION ADJUSTED DATA									
	2006 ZS'000	2005 ZS'000	2004 ZS'000	2003 ZS'000	2002 ZS'000	2001 ZS'000	2000 ZS'000	1999 ZS'000	1998 ZS'000
<b>Revenue</b>	2 180 327	2 072 140	51 480	12 283	4 350	6 969	16 321	6 135	
	661 00	963 00	664 00	404 00	341 00	055 00	199 00	267 00	
	-2 017 108	-1 994 035	-45 924	-12 159	-3 346	-5 437	-7 790	-2 915	
<b>Less operating costs</b>	52 135	744 00	257 00	300 00	472 00	361 00	955 00	164 00	
	156 218	78 103	5 536	1 123	533	1 531	2 530	216	
<b>Trading profit/(loss)</b>	340 00	219 00	407 00	104 00	869 00	694 00	494 00	103 00	
<b>Relevant investment income</b>	317 339	264 033							
	995 00	894 00							
<b>Unrealised investment income</b>	772 348	179 461							
	712 00	211 00							
<b>Equities</b>	699 366	179 461							
	055 00	211 00							
<b>Properties and other</b>	72 782								
	687 00								
<b>Operating profit before finance charges</b>	1 255 00	521 308	5 536	3 124	523	-248		216	
	317 00	123 00	407 00	104 00	869 00	291 00	90 720 00	103 00	
	-32 776	-49 971	-1 613	-328	-38	-328	-581	-222	
<b>Net interest charges</b>	263 00	647 50	883 00	61 132 00	488 00	767 00	139 00	675 00	
<b>Share of associated companies</b>	-11 832	-142 082					322		
	415 00	254 00					37 998 00	362 00	
<b>Dividends</b>	-946 063	-239 933					738	732	
	241 00	551 00					548 00	964 00	
<b>Profit before tax</b>	265 233	89 603	22 135	1 185	515	383	944	143	
	657 00	232 00	621 00	236 00	469 00	252 00	091 00	535 00	
	-366 851	-97 528	-1 442	-723	-447		315	-189	
<b>Taxation</b>	713 00	460 00	556 00	725 00	158 00	32 261 00	122 00	385 00	
	105 181	-7 918	14 693	467		348	234		
<b>Profit/(loss) after tax</b>	947 00	100 00	675 00	51 000	-8 311 00	991 00	972 00	34 150 00	
							-109		
<b>Reorganisation activities</b>							881 00		
<b>(Loss)/profit from ordinary activities</b>	103 100	-7 918	14 695	467		-515	129		
<b>Attributable to:</b>	907 00	188 00	675 00	511 00	68 311 00	991 00	102 00	34 150 00	
<b>Equity holders of parent company</b>	71 626	-122 909							
	221 00	191 00							
<b>Minority interests</b>	31 555	114 992							
	226 00	163 00				-3 182 00	28 361 00		
<b>Profit attributable to shareholders</b>	210 363	-15 806		461		-352	157		
<b>Performance in 2006</b>	894 00	326 00		513 00	68 311 00	173 00	453 00	34 150 00	
<b>Profit attributable to ordinary shareholders</b>	210 363	-15 806		461		-359	149		
	694 00	276 00		513 00	68 311 00	863 00	336 00	34 150 00	
<b>BALANCE SHEET</b>									
<b>ASSETS</b>									
<b>Non-current assets</b>									
	1 118 542	1 294 230	15 422	6 666	223	1 290	2 200	1 180	
<b>Property, plant and equipment</b>	463 00	448 00	636 00	448 00	297 00	363 00	640 00	937 00	
<b>Investments properties</b>	468 336	234 073							
	521 00	156 00							
<b>Intangible assets</b>	11 725								
	5 164 712 00	834 00				5 611 00	10 412 00		
<b>Available for sale investments</b>	2 549 352	1 379 087							
	275 00	627 00							
<b>Investment in Associates</b>	611 594	468 337							
	634 00	382 00							
<b>Investments</b>			99 454	9 197	6 288	1 659	7 706	313	
			126 00	169 50	552 00	922 00	678 00	656 00	
<b>Total non-current Assets</b>	1 553 131	1 388 654	115 086	15 804	6 512	2 959	3 983	1 991	
	213 30	461 00	762 00	143 30	158 00	946 00	724 00	993 00	
<b>Current assets</b>									
	17 446	14 549					421		
<b>Inventories</b>	857 00	036 00				69 837 00	819 00		
<b>Reinsurance receivables</b>	2 340 763	1 121 684							
	1813 00	686 00							
<b>Deferred acquisition costs</b>	441 959	100 088							
	182 00	353 00							
<b>Accounts receivable</b>	577 802	551 443				1 359	1 359		
	676 00	074 00				167 00	167 00		
<b>Deposits and cash</b>	3 140 429	102 473				829	757		
	594 00	917 00				540 00	430 00		
<b>Other current assets</b>			68 008	2 167	-971			1 052	
			33 000	882 00	549 00			186 00	
<b>Total current assets</b>	4 228 493	1 898 285				2 258	2 538		
	273 00	873 30				344 30	346 00		
<b>Total assets</b>	5 771 534	3 278 939	12 086	15 804	6 512	5 217	6 522	1 994	
	484 00	537 00	762 00	143 30	158 00	993 00	1 110 00	793 00	
<b>EQUITY AND LIABILITIES</b>									
<b>Issued share capital</b>	113 899 00	100 394 00				98 712 00	98 542 00		
	22 299								
<b>Share premium</b>	441 00	122 371 00							
	1 634 280	3 150 944				4 119	4 050		
<b>Other reserves</b>	519 00	172 00				105 00	208 00		

Retained earnings	1 491 098	1 590 542				-2 894	-2 553	
	785 00	583 00				770 00	041 00	
Equity attributable to equity holders of the parent company	2 165 895	1 590 634				1 323	1 595	
	372 00	254 00				051 00	709 00	
Minority interests	515 829	179 835				367	451	
	160 00	350 00				193 00	792 00	
Total equity	2 581 724	1 770 469	35 394	7 713	1 090	1 690	2 047	628
	232 00	700 00	9 910	468 00	975 00	244 00	201 00	581 00
Non-current liabilities								
Debtors							12 288 00	
Long and medium term loans	453 493	343 617	29 198	773	460			
	474 00	811 00	677 00	685 00	953 00	5 839 00	12 252 00	57 674 00
Life insurance fund	730 188	460 451				1 256	1 206	
	466 00	496 00				532 00	345 00	
Deferred taxation	281 537	156 917		138		-12	164	111
	597 00	610 00	844 663 00	725 00	13 711 00	298 30	366 00	515 30
Total non-current liabilities	1 435 217	961 985	30 043	912	474	1 253	1 985	159
	617 00	917 00	340 00	410 00	564 00	173 30	951 00	189 00
Current liabilities								
Short term loans and overdrafts	80 891	76 022				570	1 126	
	269 00	887 00				543 00	561 00	
Insurance claims outstanding						199	266	
						074 00	329 00	
Reinsurance payables	2 121 443	917 803						
	407 00	782 00						
Gross outstanding claims	659 048	457 386						
	527 00	376 00						
Gross unearned premium	1 251 435	740 227				187	291	
	920 00	583 00				406 00	040 00	
Accounts payable	519 736	340 627				690	1 142	
	381 00	046 00				451 00	189 00	
Other liabilities				11 738	4 946	514		1 176
				265 00	519 00	209 00		823 00
Taxation	22 427	21 433	49 258			112	161	
	414 00	142 00	505 00			890 00	302 00	
Total current liabilities	4 654 892	2 347 506	49 258	42 738	4 946	2 277	2 987	1 176
	618 00	816 00	505 00	265 00	519 00	573 00	622 00	823 00
Total equity and liabilities	8 771 534	4 278 937	115 086	5 864	6 512	5 217	6 522	1 994
	487 00	927 00	762 00	41 00	158 00	990 00	1 743 00	593 00

**ECONET - INFLATION ADJUSTED DATA**

	2006	2005	2004	2003	2002	2001	2000	1999	1998
	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000	ZS'000
Revenue	79 477 544.00	1 085 333 547.00	806 303 280.00	230 696 334.00	8 135 233.00	7 847 220.00	1 270 433.00	133 669.00	-
Cost of sales and external services sold	-20 863 624.00	-209 992 629.00	-138 854 406.00	-60 963 937.00	-2 422 371.00	-2 038 330.00	-	-	-
Gross Profit	58 613 920.00	875 340 919.00	667 450 874.00	169 732 377.00	5 712 862.00	5 826 456.00	1 279 433.00	411 609.00	-
Other income	9 114 795.00	79 269 348.00	7 561 433.00	4 892 347.00	108 766.00	29 282.00	-	-	-
Employee costs	-20 929 256.00	-139 074 250.00	-98 371 190.00	-16 599 974.00	-537 642.00	-684 492.00	-	-	-
Operating costs	-3 833 015.00	-49 808 045.00	-49 126 961.00	-11 795 350.00	-817 064.00	-631 330.00	-	-	-
- Administration	-2 545 003.00	-60 427 630.00	-30 738 541.00	-3 329 974.00	-503 906.00	-418 657.00	-	-	-
- Marketing and sales	-2 952 009.00	-36 757 912.00	-28 037 617.00	-19 758 247.00	-948 822.00	-809 415.00	-	-	-
- Net work	-4 847 057.00	-59 315 018.00	-41 314 260.00	-12 590 622.00	-1 496 954.00	-1 556 876.00	-	-	-
- Other	-	-	-	-	-	-	-	-	-
Earnings before net finance income, taxation, depreciation, amortisation and monetary adjustment	41 620 635.00	608 136 055.00	421 123 718.00	119 559 557.00	1 833 202.00	1 699 493.00	371 109.00	71 324.00	-
Depreciation	576.00	532.00	794.00	173.00	-	-	-	-	-
Amortisation	-70 260.00	-	-2 001 283.00	-957 691.00	-	-	-	-	-
Net exchange (loss)/gain	-775 710.00	-	-	-	-960 164.00	-	-	-	-
Profit from operations	21 205 669.00	489 357 523.00	166 183 641.00	64 747 695.00	973 239.00	1 741 958.00	371 109.00	371 109.00	-
Finance costs	-70 099.00	-7 269 832.00	-27 848 891.00	-9 889 858.00	-299 074.00	-951 357.00	252 478.00	57 206.00	-
Finance income	5 870 834.00	80 145 818.00	42 137 946.00	4 911 826.00	-	-	-	-	-
Profit before monetary adjustments, income from associate and taxation	26 906 404.00	562 309 497.00	221 458 236.00	59 769 654.00	474 865.00	790 601.00	119 369.00	428 315.00	-
Losses/profit on disposal of associate	-17 721 -17 721	817.00 -236 993	-	-13 142 -117 615	-	-	-	-	-
Monetary adjustment	553.00	007.00	017.00	261.00	119.00	561.00	-	-	-
Profit before taxation	139.00	787.00	319.00	401.00	184.00	502.00	369.00	118.00	-
Taxation	15 896 805.00	-15 145 403.00	-56 956 342.00	-26 096 843.00	-691 179.00	-628 971.00	-941 671.00	-5 702.00	-
Profit after taxation	5 081 665.00	53 134 380.00	166 403 977.00	20 530 560.00	1 463 665.00	424 529.00	76 968.00	76 8 416.00	-
Equity accounted earnings	628.00	724.00	840.00	-	-	-	968.00	8 416.00	-
Minority share of loss/(profit)/attribution	14 637.00	148 297.00	-205 301.00	954.00	49 278.00	-7 290.00	998.00	-	-
Earnings for the year attributable to shareholders	10 163 330.00	86 644 571.00	120 955 716.00	19 825 605.00	1 512 783.00	421 239.00	154 934.00	16 832.00	-
<b>BALANCE SHEET:</b>									
<b>ASSETS</b>									
Non-current assets	37 905	848 868	680 804	255 186	50 711	9 778	2 123	954	-
Property, plant and equipment	464.00	642.00	963.00	968.00	097.00	382.00	124.00	153.00	-
Intangible assets	2 055	23 300	29 930	14 768	806	932	-	-	-
Deferred tax assets	086.00	561.00	280.00	333.00	253.00	854.00	-	-	-
Prepaid expenses	1 240	23 300	2 569	2 569	-	164	-	-	-
Provision for impairment	049.00	184.00	3 360 735.00	061.00	53 995.00	718.00	683.00	-	-
Provision for impairment	7 945	79 230	79 495	26 541	1 153	1 163	505	115	-
Investment in associate	945.00	856.00	886.00	885.00	017.00	679.00	714.00	963.00	-
Dividends and management's loans	2 133	10 098	22 068	-	-	-	-	-	-

	96 942	1 027 190	572 654	299 966	12 767	42 056	2 639	1 070
<b>Total non-current assets</b>	573 66	801 00	358 39	428 00	462 00	822 00	521 00	656 00
<b>Current assets</b>								
Investments	6 825	18 117	-	2 748	-	187	-	23
Trade receivables	673 00	577 00	4 415 383 00	606 00	78 592 00	561 00	-	102 00
Trade and other receivables	17 487	121 00	28 284	39 394	2 708	1 265	-	-
Dividend receivable	529 00	882 00	249 00	650 00	640 00	651 00	-	-
Short-term investments	-	-	5 67 024 00	-	-	-	-	-
Prepaid expenses	13 999	161 774	88 985	-	-	-	-	-
Short-term investments	794 00	979 00	478 00	3 416 00	37 493 00	81 831 00	-	-
Prepaid expenses	-	17 578	25 603	3 598	126	-	-	49
Prepaid expenses	501 382 00	186 00	341 00	866 00	120 00	68 617 00	-	967 00
<b>Total current assets</b>	39 234	918 567	552 455	45 742	3 940	1 603	-	72
<b>Total assets</b>	378 60	1 719 657	910 849	473 742	855 90	660 00	521 00	728 00
<b>Total assets</b>	136 166	1 345 752	1 226 109	344 810	15 744	13 642	2 639	1 142
<b>Total assets</b>	955 00	645 00	633 00	526 00	347 00	482 00	521 00	225 00
<b>EQUITY AND LIABILITIES</b>								
<b>Capital and Reserves</b>								
Share capital	248 00	149 118 00	159 646 00	86 352 00	86 318 00	86 318 00	-	-
Share capital adjustment	4 187	39 271	42 113	15 728	680	680	-	-
Share capital adjustment	702 00	499 00	546 00	774 00	751 00	761 00	-	-
Share premium	74 848	683 802	694 744	566 363	6 966	6 966	-	-
Share premium	390 00	398 00	542 00	888 00	182 00	182 00	-	-
Capital redemption reserve fund	-566	-	-	-	-	-	-	-
Capital redemption reserve fund	829 00	1 815 00	1 042 00	-	-	-	-	-
Foreign currency translation reserve	46 376 00	-	348 00	-	-	-	-	-
Accumulated (profit/loss)	1 405	79 679	164 046	44 956	1 406	1 406	-	-
Accumulated (profit/loss)	233 00	950 00	234 00	423 00	131 00	652 00	-	-
Dividend proposed	3 715	32 095	36 223	3 294	-	-	-	-
Dividend proposed	107 00	895 00	159 00	803 00	-	-	-	-
Ordinary shareholders' interest	83 799	885 010	818 657	22 8370	9 059	7 546	1 600	706
Ordinary shareholders' interest	127 00	667 00	791 00	250 00	302 00	669 00	509 00	565 00
Minority interest	58 643 00	407 384 00	565 379 00	425 636 00	8 973 00	37 643 00	8 530 00	-
Minority interest	83 854	485 418	610 253	228 795	9 068	7 584	1 609	736
<b>Total capital and reserves</b>	770 00	851 00	170 00	906 00	363 00	252 00	609 00	865 00
<b>Non-current liabilities</b>								
Deferred tax liabilities	21 712	156 977	194 228	68 375	2 395	1 898	10	-
Deferred tax liabilities	716 00	815 00	888 00	523 00	349 00	546 00	683 00	-
Interest-bearing debt	-	-	2 876 378 00	14 043 00	16 308 00	170 00	299 00	318 00
Interest-bearing debt	-	-	30 823	7 255	378	-	-	-
Deferred tax assets	-	-	437 00	150 00	591 00	-	-	-
Deferred tax assets	21 712	496 982	227 928	75 747	2 790	2 615	586	650
<b>Total non-current liabilities</b>	716 00	815 00	655 00	716 00	644 00	716 00	982 00	318 00
<b>Current liabilities</b>								
Interest-bearing debt	-	-	2 796 109 00	3 251	2 221	1 697	-	-
Interest-bearing debt	25 523	75 511	56 648	289 00	621 00	295 00	-	-
Trade and other payables	796 00	112 00	379 00	628 00	1 513	1 745	443	155
Trade and other payables	23 49	31 767	43 608	-	-	-	-	-
Provisions	966 00	947 00	79 00	-	-	-	-	-
Provisions	9 706	108 557	81 444	14 604	-	-	-	-
Taxation	801 00	258 00	911 00	460 00	-	-	-	-
Other liabilities	-	15 460	-	-	-	-	-	-
Other liabilities	3 039	24 061	-	4 892	151	-	-	-
Deferred revenue	779 00	262 00	390 643 00	526 00	197 00	-	-	-
Deferred revenue	30 599	263 257	178 927	40 266	3 885	3 442	443	133
<b>Total current liabilities</b>	469 00	579 00	801 00	904 00	934 00	514 00	460 00	342 00
<b>Total equity and liabilities</b>	136 166	1 345 752	1 226 109	344 810	15 744	13 642	2 639	1 142
<b>Total equity and liabilities</b>	955 00	645 00	633 00	526 00	347 00	482 00	521 00	225 00

# HWANG - INFLATION ADJUSTED DATA

	2006	2005	2004	2003	2002	2001	2000	1999	1998
	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000	Z\$'000
Revenue	30 969	2 534 407	538 607	238 959	8 434	4 111	3 305	2 348	1 324
	282 53	791 00	353 00	347 00	40 100	886 00	414 00	216 00	663 00
	-15 862	-1 856 664	-331 061	-265 172	-8 400	-4 533	-3 005	-2 106	-913
Cost of sales	347 19	716 00	698 00	721 00	598 00	417 00	645 00	805 00	922 00
	15 136	677 743	207 545	-26 213	53	244	217	341	305
	935 34	675 00	555 00	374 00	809 00	469 00	779 00	411 00	541 00
Gross profit									
Discontinuing operations									
	-1 357	313 976		39 976					
Other operating income	487 18	550 00	469 483 00	597 00					
	-311								
Marketing Costs	531 00								
Fair value adj. amount on investment property	10 712								
	915 97								
Distribution costs		-14 869	-6 340	-1 219					
		537 00	313 00	494 00					
	-9 271	-1 071 752	381 607	-98 853					
Administrative expenses	850 75	223 00	633 00	407 00					
	70 448	-43 248	-4 075	20 100					
Loss on net monetary position	256 92	223 00	929 00	843 00					
	25 327	-136 150	14 936	-71 533	35	244	237	241	305
(Loss)/profit from operations	239 29	362 00	410 00	215 00	809 00	469 00	779 00	411 00	541 00
	4 330	165 791	-8 455	-8 906	434	139	-107	-202	-34
Net finance income	330 31	192 00	208 00	934 00	129 00	670 00	752 00	607 00	147 00
	-305	128 446	14 310	59 141					
Impairment reversal	543 46	878 00	096 00	854 00					
	39 352	98 087	21 291	-21 298	487	384	123	39	271
Profit before taxation	026 14	708 00	298 00	265 00	938 00	139 00	840 00	464 00	394 00
	-914	26 799	-19 415	7 500	-144	-99	145	-104	-104
Taxation	744 94	070 00	914 00	793 00	438 00	508 00	070 00	4 459 00	534 00
	38 437	-24 886	1 375	-13 797	523	284	215	43	166
Profit after taxation	281 20	778 00	384 00	472 00	500 00	631 00	943 00	36 130	792 00

## BALANCE SHEET:

### ASSETS

#### Non-current assets

	28 195	2 571 317	411 379	466 407	1 784	1 739	1 572	1 655	1 645
Property, plant and equipment	572 38	794 00	042 00	644 00	744 00	571 00	366 00	905 00	181 00
	11 640	12 601	1 437	1 837	54	216	456	447	582
Investments	000 00	807 00	-428 00	428 00	207 00	456 00	225 00	213 00	182 00
Assets measurable in more than one year	15 300 00	-	62 439 00	63 039 00	-	-	-	-	-
	49 811	2 583 918	-35 278	468 308	1 838	1 955	2 138	2 150	2 227
	432 38	511 00	969 00	111 00	951 00	527 00	591 00	118 00	363 00

#### Current assets

Deferred expenditure, M-Block discontinuing operations		-	-	1 055					
				353 00					
Pre-stripped expenditures	18 153	933 492	116 195	50 013					
	983 00	337 00	193 00	723 00					
	28 702	353 657	43 077	26 107	1 819	1 746	638	495	399
Inventory	869 91	326 00	878 00	789 00	293 00	505 00	656 00	473 00	405 00
Recoverable deferred foreign currency differences	4 560	999 563		2 559					
	072 40	300 00	-	881 00					
	5 069	468 696	171 347	44 141	2 998	1 772	1 360	718	510
Receivables and prepayments	926 15	907 90	171 00	345 00	928 00	135 00	955 00	827 00	567 00
					1 801	912	549	522	361
Short-term loans receivable	22 844 00	22 844 00	19 721 00	13 411 00	799 00	473 00	116 00	529 00	173 00
	416	47 753	21 240	17 319	282	112	93	64	109
Bank and cash balances	939 42	426 99	156 00	318 00	957 00	440 00	970 00	851 00	233 00
	56 866	2 803 183	351 580	141 251	6 903	4 263	2 642	1 825	1 400
	634 87	1 10 00	126 00	030 00	007 00	553 00	697 00	680 00	379 00
	106 674	-5 387 102	766 959	609 559	8 741	5 119	4 671	3 928	1 627
	367 35	651 00	055 00	141 00	958 00	381 00	788 00	798 00	742 00

### EQUITY AND LIABILITIES

#### Capital and reserves

Share capital	501 930	3 687 854	537 717	537 707					
	462 94	606 00	125 00	500 00					
	25 812	1 868 935	271 535	269 625					
Capital reserves	128 11	909 00	863 00	474 00					
	2 283	-2 637 692	-199 886	-401 761					
Retained (loss)/profit	978 85	145 00	413 00	397 00					
	79 029	2 939 098	409 362	405 495	2 002	1 677	1 192	1 117	7 036
	569 90	460 00	575 90	177 00	326 00	895 00	915 00	813 00	673 00

<b>Non-current liabilities</b>									
PLASP	51 686.48	77 089	-	-	-	-	-	-	-
Lease liability	695	-	-	-	-	-	-	-	-
Deferred taxation	825.82	891 062	135 173	119 251	554	539	470	615	657
Long term Debt	13 121	996 00	505 00	333 00	369 00	329 00	345 00	396 00	721 00
	137.20	-	-	-	124	129	373	456	657
	-	-	-	-	000 00	989 00	570 00	391 00	826 00
	7 1958	968 152	135 173	119 251	678	640	843	1 071	1 313
	849 51	480 00	505 00	333 00	369 00	318 00	915 00	697 00	557 00
<b>Current liabilities</b>									
Grants	118	-	-	8 150	-	-	-	-	-
Grants	289.93	-	37 643.00	368 00	-	-	-	-	-
Bills and acceptance credits	-	28 310	2 610	-	-	-	-	-	-
Lease payable within one year	4 572	777 40	952 00	971 450.00	-	-	-	-	-
Productive Sector Funding	291 68	1 011 784	77 840	34 233	-	-	-	-	-
PLASP	-	784 00	803 00	446 00	-	-	-	-	-
Lease liability	162	-	085 00	-	-	-	-	-	-
PLASP	086.70	37 731	-	34 347	-	-	-	-	-
Lease liability	825	903 00	-	439 00	-	-	-	-	-
Paid-up	171.66	-	-	-	-	-	-	-	-
Other liabilities	7 971	391 007	125 439	-	2 457	1 975	1 336	164	467
Provisions for discontinuing operations	645.35	478 00	427 00	-	665 00	921 00	208 00	293 00	166 00
Provision for taxation	-	-	-	-	1 643	1 824	1 098	1 945	762
Provision for taxation	-	-	-	-	598 00	946 00	232 00	158 00	346 00
Provision for taxation	-	1 254	1 866	3 389	-	-	-	-	-
Provision for taxation	-	978 00	108 00	495 00	-	-	-	-	-
Provision for taxation	-	9 751	3 582	3 674	-	-	-	-	-
Provision for taxation	1 394.92	792 00	142 00	433 00	-	-	-	-	-
Provision for taxation	13 651	1 479 851	232 423	84 726	6 061	3 800	2 434	1 739	1 229
Provision for taxation	982.45	711 00	155 00	631 00	263 00	467 00	449 00	258 00	512 00
Provision for taxation	116 670	5 387 192	666 959	909 550	8 341	6 119	4 671	5 928	3 627
Provision for taxation	501 35	651 00	335 00	141 00	950 00	180 00	288 00	796 00	342 00
<b>Total equity and liabilities</b>									

# BINDI RA - INFLATION ADJUSTED DATA

	2006 Z\$'000	2005 Z\$'000	2004 Z\$'000	2003 Z\$'000	2002 Z\$'000	2001 Z\$'000	2000 Z\$'000	1999 Z\$'000	1998 Z\$'000
<b>Turnover</b>	-	-	822 520	196 442	217 652	3 117	3 973	2 722 100 000	4 12 000 000
Stock of callants	-	-	562 485	345 770	168 328	3 430	3 613	-	-
By-product ad.	-	-	48 258	9 903	600 000	200 000	1 000 000	-	-
Tax reliefing	-	-	145 982	37 669	2 520 900 000	850 700 000	768 200 000	-	-
Inventive reserve	-	-	47 550	600 000	600 000	436 800 000	591 600 000	-	-
<b>Operating profit</b>	-	-	16 778	27 945	52 752	723 800 000	792 600 000	556 300 000	137 600 000
Net interest payable	-	-	78 483	5 342	600 000	23 900 000	9 600 000	267 300 000	4 08 900 000
<b>Profit/loss before monetary adjustment</b>	-	-	-11 705	22 705	23 773	699 900 000	683 000 000	449 000 000	19 840 000
Monetary adjustments	-	-	17 660	63 375	35 140	-	-	-	-
<b>Profit before taxation</b>	-	-	5 955	86 378	57 633	723 800 000	792 600 000	556 300 000	137 600 000
Taxation	-	-	-	-	-	-	-	-	-
- current	-	-	-	-	-	-	-	-	-
deferred	-	-	-	-	-	-	-	-	-
<b>Profit after taxation</b>	-	-	-	-	-	-	-	-	-
Appropriations	-	-	-	-	-	-	-	-	-
Non-distributable reserves	-	-	-	-	-	-	-	-	-
Interim dividend	-	-	-	-	-	-	-	-	-
Proposed final dividend	-	-	-	-	-	-	-	-	-
<b>Retained profit for the year</b>	-	-	-	-	-	-	-	-	-

## BALANCE SHEET:

### ASSETS

<b>Non-current assets</b>	902 531	103 219	119 982	3 699	3 593	1 346 486	1 192 700
Fixed assets	902 531	103 219	119 982	3 699	3 593	1 346 486	1 192 700
Loans	2 251	2 160	699 000 000	31 200 000	2 000 000	18 700 000	21 600
<b>Total non current assets</b>	904 782	105 379	120 680	3 730	3 593	1 365 186	1 214 300

### Current assets

Stock	42 233	90 317	46 430	5 594	3 554	455 700	455 700
Securities	60 769	27 586	23 569	304 000 000	304 000	304 000	304 000
Debtors	302 421	22 866	20 891	7 512	8 138	197 500	197 500
Loans at val.	20 375	-	-	151 000 000	151 000	151 000	151 000
Short term deposits and cash at bank	2 819	1 716	-	-	-	388 100	255 500
Short-term investments	328 218	141 928	70 495	41 565	20 810	1 036 023	912 200
<b>Total current assets</b>	837 566	2 9 298	151 175	23 170	24 320	2 382 442	2 135 500
<b>TOTAL ASSETS</b>	1 742 348	134 677	271 855	26 900	27 913	2 747 628	2 349 800

### EQUITY AND LIABILITIES

<b>Capital and reserves</b>	126 000	126 000	126 000	126 000	126 000	126 000	126 000
Share capital	-	-	-	-	-	-	-

Share capital (inflation adjustment)	459 981.00	197 559.00	197 559.00	4 334.50	4 334.50	-	-
Non-distributable reserves	123 428.00	5 491.00	5 494.00	124.00	569.50	-	-
Distributable reserves	-41 144.00	-89 241.00	-117 043.00	-1 718.30	-1 714.80	-	-
Proposed final dividend	-	58 907.00	-	63.00	195.60	-	-
<b>Shareholders' equity</b>	-	-	542 591.00	142 845.00	86 136.00	2 929.20	3 510.80
Long term loans	-	-	-	3.10	20.10	13 000.00	10 500.00
Deferred tax	70 823.00	36 900.00	26 685.00	995.10	629.70	270 400.00	227 300.00
Environmental rehabilitation provision	21 802.00	9 730.00	10 607.00	303.10	-	-	-
	-	-	635 016.00	179 548.00	123 428.00	4 230.50	4 160.60
	-	-	1 662 800.00	1 287 300.00	-	-	-

#### Current liabilities

Creditors	56 161.00	44 062.00	38 815.00	-	-	475 400.00	391 900.00
Taxation	908.00	10 053.00	14.00	-	-	20 000.00	-
Short term loans and overdrafts	101 963.00	15 638.00	29 655.00	-	-	244 400.00	200.00
Other liabilities	-	-	-	1 353.50	1 061.30	525 100.00	475 900.00
Provision for dividend	9 512.00	-	-	-	-	-	-
<b>Total current liabilities</b>	-	-	202 544.00	69 751.00	69 482.00	1 261 900.00	868 000.00
<b>TOTAL EQUITY AND LIABILITIES</b>	-	-	847 560.00	249 299.00	192 910.00	5 584.00	5 521.00
	-	-	2 510 360.00	2 536 599.00	2 510 360.00	2 510 360.00	2 510 360.00

SOURCES: Company Annual reports 1998 to 2006